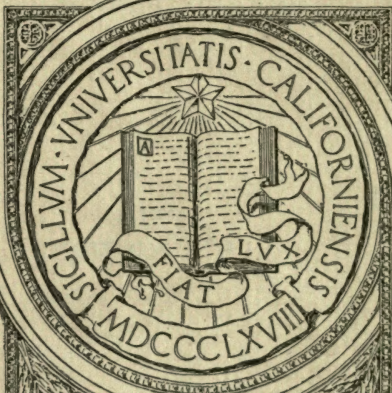
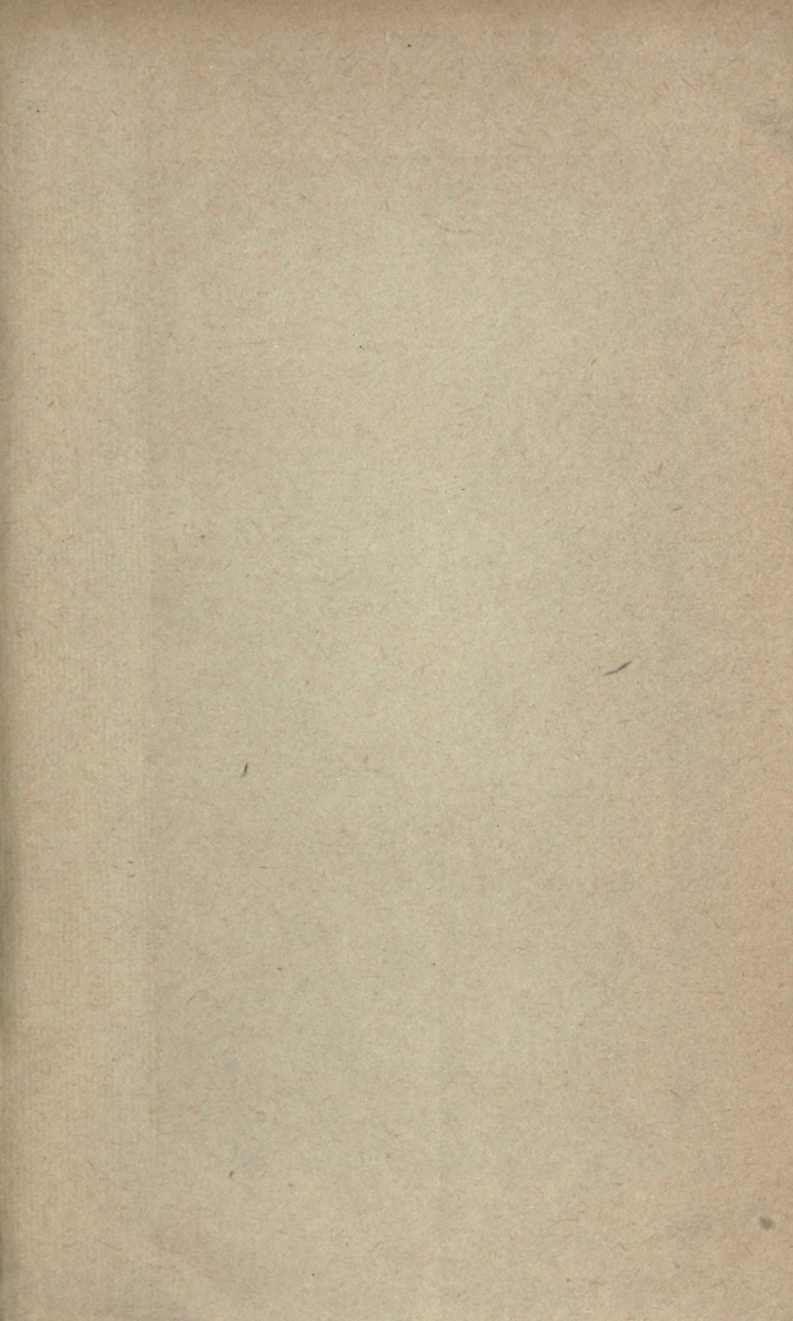


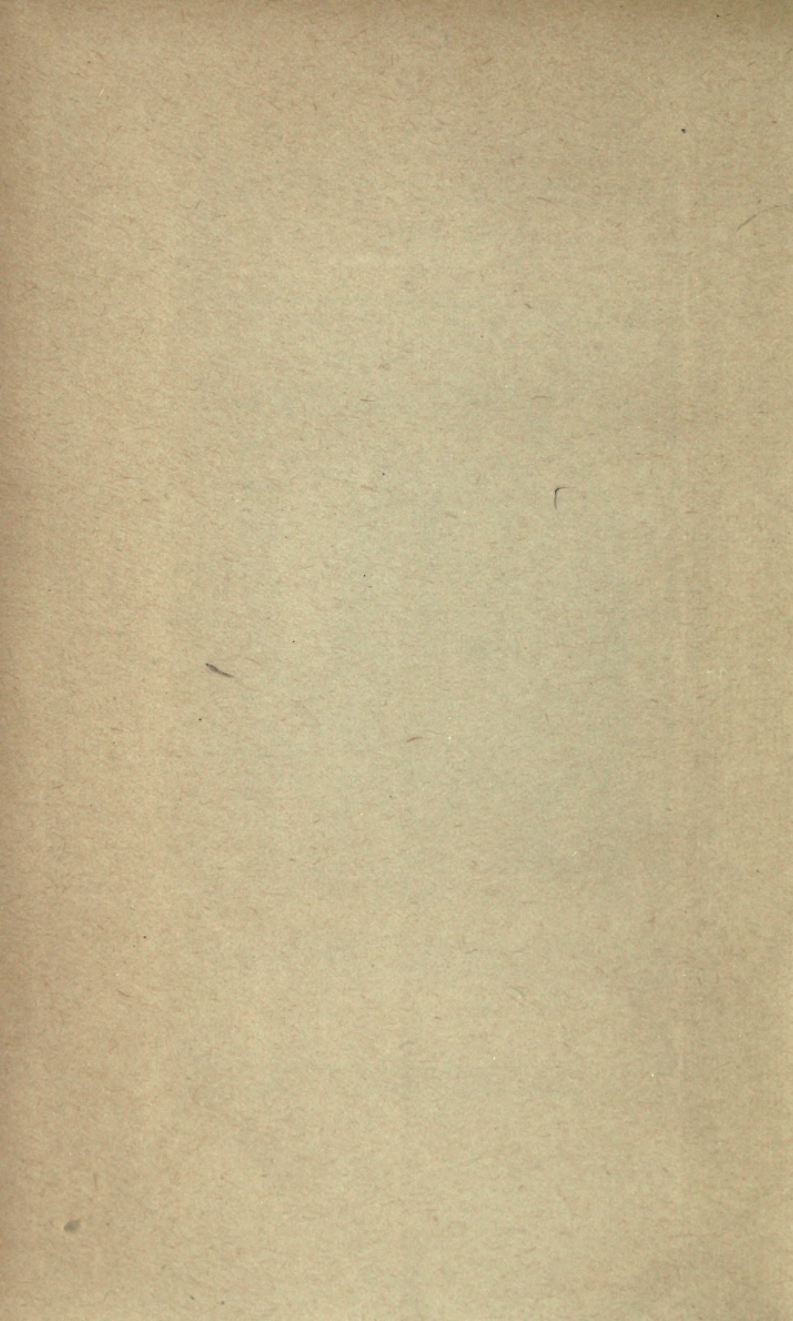


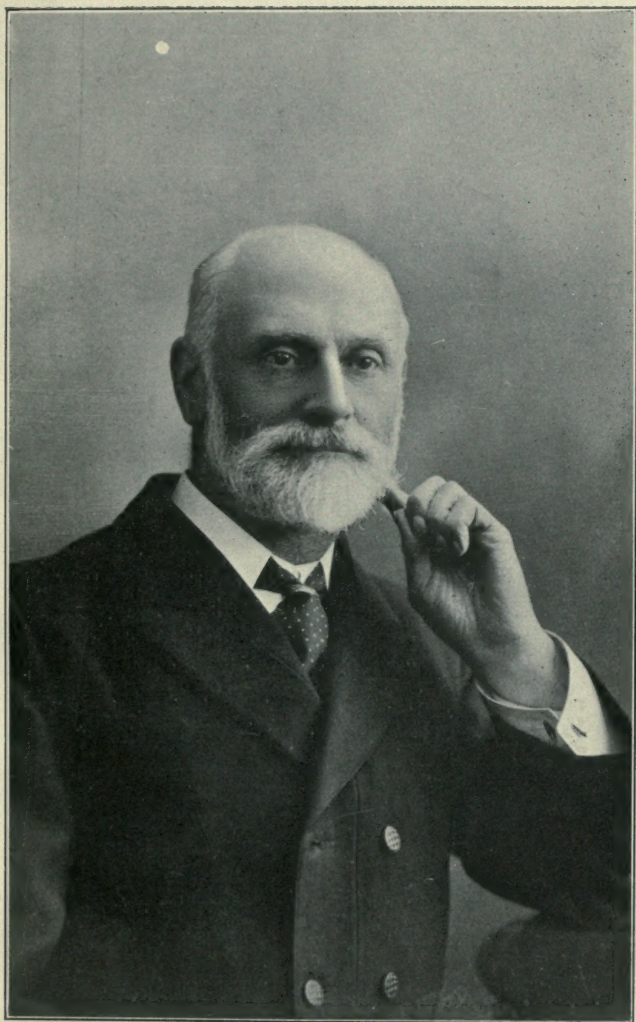
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Yours faithfully,

J. T. BIGGS.

LEICESTER:
SANITATION VERSUS VACCINATION.

J. T. BIGGS, J. P.

Member of the Leicester Sanitary Board,
Chairman of the Sanitary Committee, &c. &c.
1881-1882.

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LEICESTER:

SANITATION CLASSICAL VACCINATION

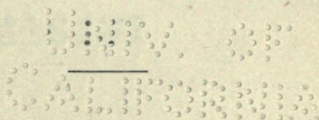
LEICESTER : SANITATION versus VACCINATION.

ITS VITAL STATISTICS COMPARED
WITH THOSE OF OTHER TOWNS,
THE ARMY, NAVY, JAPAN, AND
ENGLAND AND WALES.

BY

J. T. BIGGS, J. P.

Member of the Leicester Town Council,
and of its Sanitary Committee, for over
Twenty-Two Years.



Printed for and Published by
THE NATIONAL ANTI-VACCINATION LEAGUE,
27 Southampton Street, Strand, London, W.C.

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LEICESTER SANITATION versus VACCINATION

ITS ATTITUDE COMPARED
WITH THAT OF OTHER TOWNS
THE LEICESTER SANITATION
ENGLAND AND WALES

*Gift of
Miss M. S. Pettit*

GIFT

J. T. BIGGS, J.P.

Member of the Leicester Town Council
and of its Sanitary Committee for over
Twenty Two Years

UNIV. OF
CALIFORNIA

THE NATIONAL ANTI-VACCINATION LEAGUE
Printed for and Published by
27 Southampton Street, Strand, London, W.C.

DEDICATED

to my honoured friends,

MR. and MRS. WILLIAM TEBB,

with all their Co-workers for emancipation
from the yoke of legal and other disabilities,
imposed or caused by the Vaccination Laws :

and,

to all who earnestly endeavour to promote
and secure Liberty and Justice for Mankind.

416437

FOR the Historical part of this work, I have availed myself of Mrs. Fielding Johnson's "Glimpses of Ancient Leicester"; Mr. James Thompson's "History of Leicester"; Mr. W. Napier Reeve's "Chronicles of the Castle and Earls of Leicester"; and Mr. William Kelly's "Royal Progresses." I am also indebted to Mrs. Fielding Johnson for the use of several blocks for the illustrations, for which I cordially thank her. For valuable aid freely rendered in other parts of the work, I must not omit to mention the late Mr. Jabez Hunns; and I tender to Mr. J. P. Swan and all others my grateful acknowledgments and thanks.

J. T. BIGGS.

Leicester, 1912.

CONTENTS.

INTRODUCTORY.

PART I.—HISTORICAL PREFACE.

Leicester, Past and Present; British Period; Roman Period; Saxon Period; Danish Period; Saxons Restored; Norman Period; Plantagenet Period; Lancastrian and Yorkist Period; Parliaments at Leicester; Royal Visits to Leicester; Tudor Period; Leicester Abbey; Stuart and Commonwealth Period; Leicester's Ancient Charters; Hanoverian Period; Victorian Period.

Chapters I.-XVI. - - - pp. 17-70

PART II.—LEICESTER'S AWAKENING.

A Notable Revolution; Vaccination and Small-Pox; Parliament and Vaccination; From Darkness to Light; Mr. P. A. Taylor, M.P., and Parliament; Wholesale Prosecutions—Their Effect; The Position in Leicester; Leicester Martyrs; The Great Leicester Demonstration.

Chapters XVII.-XXV. - - - pp. 71-130

PART III.—PROPOSED PARLIAMENTARY INQUIRY.

Mr. J. A. Picton, M.P., and the Government ; The Royal Commission on Vaccination ; Its Appointment, Constitution, and Reference ; Leicester and the Royal Commission ; The Leicester Guardians and the Royal Commission ; Leicester, Royal Commission Witnesses—A Synopsis of Their Evidence.

Chapters XXVI.-XXX. - - pp. 131-170

PART IV.—STATISTICAL EVIDENCE.

A Lengthy Examination ; Vaccinal Injuries and Deaths at Leicester ; Vaccination and Erysipelas ; Officially Authenticated Deaths from Vaccination ; The Registrar-General's Ghastly Story ; Small-Pox in Leicester ; Leicester Small-Pox Epidemics Compared ; Importations of Small-Pox ; Errors of Diagnosis ; Small-Pox and Fevers ; Zymotic Diseases ; Incidence of Zymotic Diseases ; Pock-Marked Faces ; The "Protection" Theory ; The "Protection by Marks" Theory ; The Royal Commission and the "Marks" Theory ; Leicester's Infantile Death-Rate ; Saving the Children's Lives ; The General Death-Rate at Leicester.

Chapters XXXI.-XLIX. - - pp 171-246

PART V.—STATISTICAL COMPARISONS.

Leicester Compared with other Towns ;
 Leicester and London ; Comprehensive
 Comparisons with Leicester ; Leicester and
 Glasgow ; Leicester and Sheffield ; Crucial
 Comparison for Leicester ; Leicester, Large
 Towns, and England and Wales—General
 Death-Rates Compared.

Chapters L.-LVI. - - - pp. 247-294

PART VI.—THE ROYAL COMMISSION ON
VACCINATION.

The Investigation Ended ; How the
 Commission "Blinked" the Facts ; A "One-
 Sided Inquiry" ; Professor Alfred Russel
 Wallace on the Commission ; View of the
 Dissident Commissioners ; Final Report
 and Recommendations.

Chapters LVII.-LX. - - - pp. 295-306

PART VII.—PARLIAMENT AND THE ROYAL
COMMISSION.

The Bill of 1898 ; Leicester's Effort
 to Abolish Penalties ; The Vaccination
 Act of 1898 ; The Illusory "Conscience
 Clause" ; The Leicester Guardians and
 the Local Government Board ; Memorial
 to the Local Government Board ; Guardians
 at the High Courts of Justice ; Mass
 Meeting at Floral Hall ; The Famous
 Mandamus ; Writ of Attachment ; End of
 the Struggle ; National Conference in
 Leicester ; Renewal of Prosecutions.

Chapters LXI.-LXVIII. - - - pp. 307-356

PART VIII.—SANITATION VERSUS VACCINATION.

The Late Mr. Henry Dalby Dudgeon on Sanitation ; The Chairman of the Leicester Sanitary Committee (Ald. Windley) and the Public Health ; Ald. Windley and the Royal Commission ; Leicester Medical Officers of Health *before* the Introduction of the "Leicester Method," 1846-76 ; Leicester Medical Officers of Health *after* the Introduction of the "Leicester Method," 1885-1910.

Chapters LXIX.-LXXVI. - pp. 357-410

PART IX.—LEICESTER SMALL-POX EPIDEMICS.

The Epidemic of 1892-94 and Dr. Priestley ; Lessons of the Small-Pox Epidemic at Leicester, 1892-94 ; Leicester Small-Pox Epidemic, 1902-04, and Dr. Millard ; Leicester and Small-Pox, 1902-04.

Chapters LXXVII.-LXXX. - pp. 411-460

PART X.—THE "LEICESTER METHOD."

How Leicester Deals with Small-Pox ; Dr. Johnston, M.O.H., 1877-85, on Isolation and Quarantine ; Cost of the "Leicester Method" ; Quarantine ; Hospital Expenditure ; The "Leicester Method" at Work ; Ald. Windley (Chairman of the Leicester Sanitary Committee) on the "Leicester Method" ; Dr. C. Killick Millard, M.D. (Medical Officer of Health for Leicester), on the "Leicester Method."

Chapters LXXXI.-LXXXVII. - pp. 461-514

PART XI.—SUPPLEMENTARY EVIDENCE AGAINST VACCINATION.

Vaccination and Syphilis at Leicester ;
The Royal Commission on Syphilis at
Leicester; Leicester's Traducers Unmasked;
The Dissentient Commissioners on Vac-
cination and Syphilis ; Professional Opinion
on the Invaccination of Syphilis ; Vaccina-
tion and Leprosy ; The Leprosy Investiga-
tion Committee ; Inoculation Experiments ;
Tuberculin and Leprosy ; Vaccination and
Tuberculosis ; Diseases Injected, Intensi-
fied, and Increased by Vaccination and
Inoculation ; Inoculable Diseases (England
and Wales).

Chapters LXXXVIII.-XCVII. pp. 515-578

PART XII.—LYMPH.

What is Vaccine Lymph ? ; Varieties of
Lymph ; Humanised Lymph ; Animal
Lymph ; Glycerinated Calf Lymph ; How
Glycerinated Calf Lymph is "Manufac-
tured" ; Dr. Klein's Microbic Experiments ;
Small-Pox Virus Vaccine ; Vaccination ;
Germany and Italy ; Eminent Opinions on
Vaccination—Professor Crookshank, Dr.
Charles Creighton, Alfred Russel Wallace.

Chapters XCVIII.-CIV. - - pp. 579-629

PART XIII.—THE INOCULATION MANIA.

Anti-Toxin and Diphtheria ; Continental
and American Evidence Against Anti-

Toxin ; London Evidence Against Anti-Toxin ; Evidence from the Registrar-General Against Anti-Toxin ; Leicester's Evidence Against Anti-Toxin ; What is Anti-Toxin ? ; Tuberculin and Tuberculosis ; The " New " and " Old " Tuberculins ; Tuberculin Treatment ; Tuberculin Dispensaries ; ' British Medical Journal ' and Tuberculin ; The Royal Commission on Tuberculosis ; " Anaphylaxis " !!! ; Sea Water and Diarrhœa.

Chapters CV.-CXVIII. - - pp. 630-700

PART XIV.—SUMMARY AND CONCLUSIONS.

A Thoroughly Impartial Inquiry Wanted ; Leicester Evidence Reviewed ; Leicester Evidence—Its Teachings.

Chapters CXIX.-CXXI. - - pp. 701-716

PART XV.—APPENDIX.

Statistical Tables—41, 42, 43, 44, 45, 46,
47, 48, 49, and 50 - - - pp. 717-742

Parliamentary Tables—54, 55, and 56 pp. 743-748

XVI.—List of Tables and Diagrams pp. 749-753

Leicester Vital Statistics for 1911 - p. 754

XVII.—Index - - - - - p. 755

INTRODUCTORY.

As one who took a humble part—as a witness for Leicester—in the proceedings before the Royal Commission on Vaccination (1889-1896), I have long cherished the desire to continue to a later date the more important, if not the whole, of the Tables and Diagrams of Vital Statistics which I had the honour to submit to that Commission. The task—a labour of love—having for its object the manumission of mankind from a hateful medical thralldom, has occupied the spare moments of many years of a busy life.

Often have I wished that this work, for its own sake and the great issues involved, had been in more competent and less occupied hands, but the results of my investigations as to the effects of vaccination are given with the fervent hope that, at least, they may promote inquiry, induce impartial consideration, and elucidate the truth on so important a question affecting the public health.

Leicester has taken a foremost part in many stirring historical events, but in none has its activity been more potent (as I believe for good) than in the much-debated and vexed question of vaccination. Since that operation was enforced

by penal statute, scarcely any writer on the subject has omitted to make some reference to the opposition Leicester has uniformly manifested to its compulsory infliction on an unwilling people. Unquestionably this antagonism has materially enhanced the success of the anti-vaccination movement.

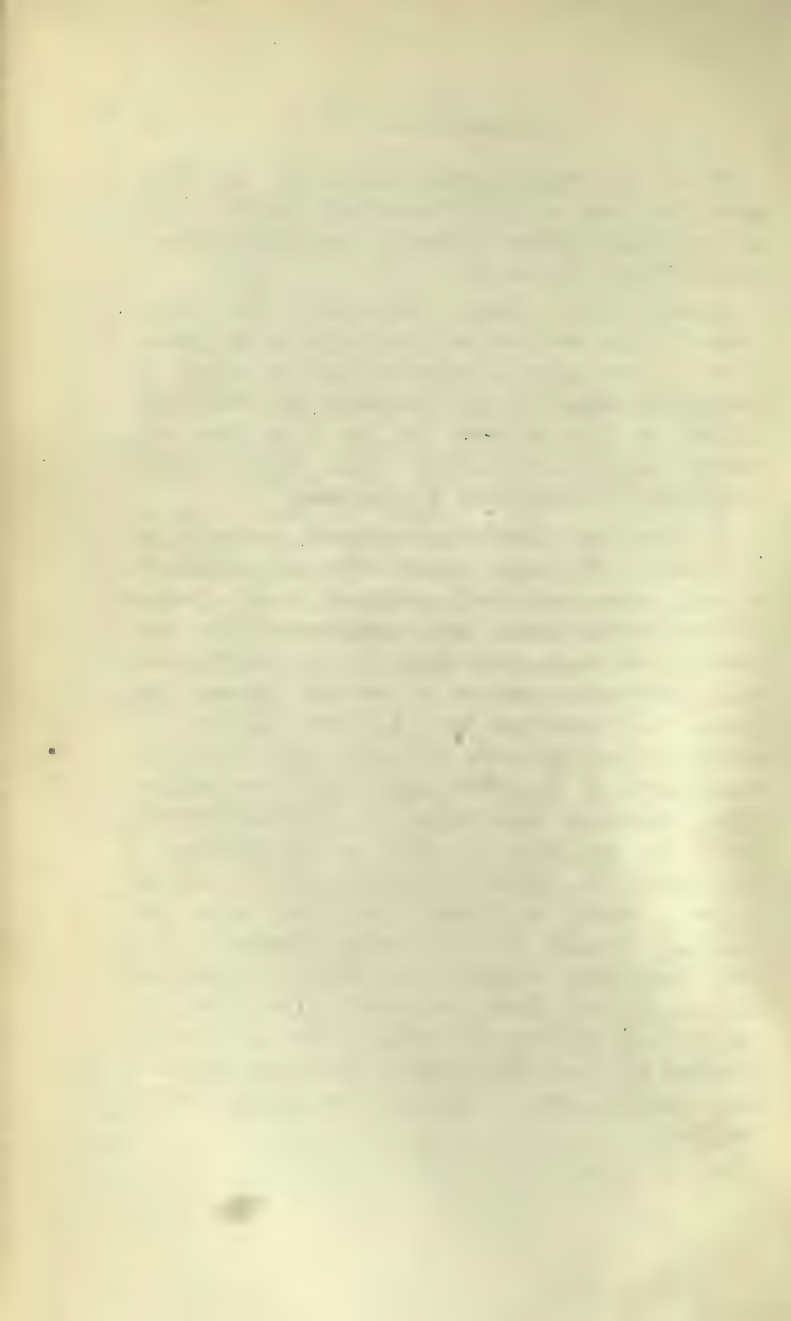
Respecting Leicester, much ignorance prevails which it is desirable to enlighten. Not so long ago a gentleman, travelling from London, inquired of a friend what town they were approaching. "Leicester," was the reply. "Oh!" ejaculated the inquirer, "that is the place where they always have the small-pox!" It was impossible to listen silently to such an untruthful libel, so I at once informed my fellow-travellers that Leicester not only has less small-pox than any other town of a similar character, but also very little vaccination.

That incident, however, serves to illustrate the feeling towards, and even the belief of many people, respecting Leicester. Indeed, to such an extent has prejudice become fixed, especially in the official mind, against the Borough, as the home of the "anti," that our local authorities have at times experienced difficulty in negotiating loans required for public works that are necessary for the development of a bright, healthy, and progressive community, such as Leicester is to-day; indeed, I might add, as Leicester has been ever since its rejection of the Jennerian dogma, and the substitution of personal and municipal cleanliness. This doctrine of cleanliness has now become part and parcel of its every-day life.

Owing to these circumstances, it has been suggested that a brief historical sketch might not be inappropriate, although not strictly homogeneous with this work.

Having always taken considerable and active interest in the welfare and reputation of my native town, it has been a congenial task to accede to that proposition. A few chapters are, therefore, devoted to this purpose, in the hope that any wrong impressions which have been formed respecting Leicester may be removed.

In this I am greatly encouraged, not only by the greater, the more sympathetic and intelligent interest, now universally evinced in all matters relating to the health and happiness of the community, but, more particularly, by the indisputable and remarkable success in saving human lives which has signalised the "Leicester Method" of sanitation and isolation in coping with small-pox, as opposed to the *effete nostrum* of vaccination. This auspicious experiment, in a manufacturing town, on so large a scale as to embrace a population of nearly a quarter of a million persons, ought to convert even the most pronounced devotee of the vaccine dogma. If it does not, then "neither will they be persuaded though one rose from the dead." Our motto for fighting all zymotic diseases is that so cleverly adapted by Lord Beaconsfield from the adage of the ancient sage—"Sanitas sanitatum, omnia sanitas!"





1. The Castle "Mount" or "Mound." (Believed to be the work of the British tribe, Coritani.)
2. The "Jewry Wall." (Fragment of Roman masonry.)



1. The "Milliare" or Roman Milestone. (Now in the Museum.)
2. The "Roman Pavement." (In situ as laid over 1,500 years ago.)

PART I.

HISTORICAL PREFACE.

LEICESTER, PAST AND PRESENT.

CHAPTER I.

BRITISH PERIOD, B.C. 844—A.D. 52.

THE County-Borough—in ancient times the City—of Leicester is one of the oldest centres of civilised life in Great Britain. The name is derived from the Celtic “Caer,” and not, as some suppose, from the Roman “Castrum.” According to Geoffrey, of Monmouth, it was founded by King Lear (844 B.C.) centuries before London was even thought of, and also had priority of nearly a century over the Eternal City, Rome (750 B.C.).

However this may be, the original colony was undoubtedly very remote, and the site on the banks of the River Leir was indubitably selected as favourable for a settlement by the ancient Britons.

As “Cair-lerion,” Leicester appears in the list of thirty-three British cities, named in the work

of Nennius, which is assigned to the year 796 B.C. The ancient name is perpetuated by a village called Leire, not far from where the river—now the Soar—takes its rise.

Within the precincts of Leicester Castle, the Castle “Mount” or “Mound,” now very much reduced in height, is probably the oldest artificial work in the neighbourhood constructed by the native inhabitants, the Coritani. The “Mount” is supposed to be the original Celtic *Caer*, or Castle, from which the name *Kaer-leir*, *Caer-lerion*, *Caer-Legria*, *Legra-ceastre*, or Leicester, is derived.

The antiquity of Leicester is, therefore, beyond question, and, according to historians, not only King Lear and his youngest daughter, afterwards Queen Cordeilla, but also Kings Morvidus, Gorbonian, Arthgallo, Elidure, and many other of the pristine British Kings and Queens, either visited, were crowned, reigned, held their Courts, or were buried in this ancient City.

CHAPTER II.

ROMAN PERIOD, A.D. 52-448.

WITH the Roman conquest and occupation of this country, from 52 to 448, Leicester became a Roman stipendiary town, called *Rataë*, and one of the largest military stations in Britain. The Roman city is supposed to have been founded either by *Ostorius Scapula*, in the middle of the first century, or later by *Julius Agricola*, when on his way to the North.

It was of such importance that a Mint was established, and many extensive and imposing buildings erected, as evidenced by the numerous portions of massive stone columns which have been exhumed, and the discovery in 1850 of an entire site of a Roman villa. Near the *Prætorium* and *Basilica*, were traces of many temples, baths, and other edifices. A small fragment of Samian pottery, bearing an inscription full of human pathos, probably a love token, from *Lucius the Gladiator*, to his sweetheart, *Verecinida Lydia*, indicates there might also have been an amphitheatre.

There are on public exhibition two fine tessellated pavements in situ, as laid by Roman workmen more than eighteen centuries ago, one of these being the floor of the residence of the

Præfect or Roman Governor, and both in excellent preservation. These and other remnants of a similar character; the massive and imposing fabric of masonry called the "Jewry Wall"; the "Milliare," or Roman milestone; the stone bases and heads of columns, with a large number of other remains; Samian ware; glass and ornaments—all testify to the domination and long-continued sway of Imperial Rome. "The Milliare," one of the most important of these relics, the oldest stone inscription known in Britain, is now in the Museum. It is cylindrical in form, three feet six inches high, and twenty-one inches in diameter. It was disinterred in 1771 by the side of the Roman "Via Fossata," or "Fosse Way." It bears this inscription:—

"IMP. CÆSAR, DIV. TRAIAN, PARTE F DIV.
TRAIAN HADRIAN, AVG. PONT. IV., COS III.
A RATIS II."

The translation is as follows:—"To the Emperor and Cæsar, the august Trajan Hadrian, son of the divine Trajan, surnamed Parthicus, grandson of the divine Nerva Pontifex Maximus, four times invested with tribunal power, thrice Consul. From Ratæ two miles."

From this it is not an unreasonable conjecture that the Emperor Hadrian actually visited the city on his way to the North. Besides the "Fosse Way," another of the principal roads constructed by the Romans, the "Via Devana," passed through the City. The advancement of Leicester under the Romans must have been both continuous and rapid, for its name, Ratæ, as one of the important

stations in Britain, was published in Ptolemy's Geography at the beginning of the second century. Considerable evidence of Roman buildings has been found even outside the ancient city walls. Being situate on the "Fosse Way," several Roman Emperors, or Generals, who afterwards assumed the purple, would certainly visit, or pass through, Rataë on their journeyings to the North and South of Britain.

Among those, in addition to the mighty Hadrian, we number Clodius Albinus ; the vindictive Severus ; the cruel Caracalla ; Carausis, his brother Geta, and Allectus. Also Constantius, with his British wife, the Empress Helena, father and mother of Constantine the Great, who was born at York. Constantine was the founder of Constantinople, of the Western Empire, and of Christianity as the prevailing religion of the Roman Empire. Possibly, also, Constantine's nephew, the gifted Emperor Julian, called the Apostate, visited Rataë. Julian offered sacrifices to the gods, and his mighty and subtle influence was directed to uproot Constantine's work, to destroy Christianity, and to revive and re-establish Paganism throughout the whole Roman Empire.

Rataë retained its importance as a city in this province until the exigencies of the Empire necessitated the entire withdrawal of the Roman forces from the country.

It will be seen that Leicester, therefore, possesses a wealth of ancient historical material and association almost unrivalled in the chronological annals of Britain.

CHAPTER III.

SAXON PERIOD, A.D. 550-780.

AFTER the departure of the Romans and the decadence of the Roman Municipium, the Engles (English) took possession of Leicester, about A.D. 550. They adopted the Celtic and Roman British name of *Caer-Legria*, adapting it to English as *Legre-Ceastre*. *Crida* became the first Saxon King of Mercia, in 586, with Leicester as the capital. Under the Saxons, Leicester continued to hold the title of city, and in 658 the early Bishops, who occupied the Bishop's Palace, officiated at the Cathedral, then existing upon the site where St. Margaret's Church now stands, but outside the city walls. The diocese of Mercia, being nearly a fourth part of the whole country, was subdivided by Theodore, Archbishop of Canterbury, about 678. He appointed a Bishop over the Middle Engles, to the See of Leicester, and eleven Prelates followed in succession, until the See was reunited to Lichfield, in 691. It was again separated, and also afterwards reunited to Lichfield, in 703. But in 737 Leicester was instituted an independent Bishopric, with Totta (or Torthelm) as its first regular Bishop. Since that time the See has been merged in that of Peterborough.

Kenulph, the fourteenth Saxon King of Mercia, and his brother, Ceolwulph (who afterwards

became King), along with Wulfred, Archbishop of Canterbury, and Unwona, Bishop of Leicester, met together, and are said to have executed and witnessed a Charter at Leicester in 810.

In Burnett's "History of the Reformation" (page 251), a reference is made to the intention of Henry VIII. to found a number of new Bishoprics, Leicester being one. Some of those were actually created, but through some cause Leicester was omitted. Recently a Bishop of Leicester (Suffragan, of Peterborough) has been appointed.

"Legre-Ceastre" continued as the capital of one of the Saxon Kingdoms until towards the close of the eighth century, when the Saxon dominion was seriously menaced by the predatory incursions of the fierce, aggressive, and warlike Danes. Leicester remained the centre of the Middle Engles, and retained its title of city until the Norman Conquest, being referred to in a Council held in the eighth century as "*Legoracensis Civitas*." (Stubbs and Haddan.) It even appears in Domesday Book as "*Civitas de Ledcestre*."

CHAPTER IV.

DANISH PERIOD, A.D. 780-920.

THE Danes captured the city in 780, and Leicester then became one of the famous "Five Boroughs" of the Danish Confederacy. The Saxons afterwards recovered the city, but the Danes re-took it in 874. It remained more or less in their possession until 920, when Ethelflæda, the warlike daughter of the noble, learned, and patriotic King Alfred the Great, and widow of Ethelred, Duke of Mercia, expelled them, and the town again came under Saxon rule. The Danes were not, however, entirely dislodged from the neighbourhood, for the city was once more in their possession from 925 to 940. In 941 a momentous battle was fought between the Saxons on one side, and the Norwegians and Danes combined on the other, outside the city walls. Edmund, King of Mercia, led the Saxons, whilst the Norwegians and Danes were under Onlaf, King of Norway. Although the battle was a scene of terrible carnage, it proved indecisive. The struggle was not, however, renewed, for through the mediation of Odo, Archbishop of Canterbury, and Wulfstun, Archbishop of York, a friendly division of the country was effected between the two Kings, by which the survivor was to succeed to the

sovereignty of the whole area. Onlaf dying soon afterwards, Edmund became King of all England.

The alternate occupations of Leicester by the Danes and Saxons followed each other in rapid succession, for in 1013 the Danes once again re-captured the town, and occupied it until 1041, when the Saxons recovered and held it until the advent of the Normans.

The Danes, however, maintained control long enough to give their name to the hills on the north-west side of the Borough, laying towards the Leicester and Charnwood Forests. An annual Fair was held at Easter, until comparatively recent times, on these hills, called "Dane Hills Fair."

CHAPTER V.

SAXONS RESTORED, A.D. 920-1068.

AFTER the defeat of the Danes by Ethelflæda, who reigned as Queen about eight years, the city walls, probably built on the old Roman foundations, were restored. Leicester soon after this must have been regarded as a place of security, for a Mint was established here in 978. Leicester continued, however, to be the scene of devastating warfare, for in 1016, through another political quarrel, it was completely sacked by Edmund Ironsides. It was constituted the centre of one of the three great Saxon Earldoms, into which the Kingdom was divided during the reign of Edward the Confessor. The mighty Leofric, Earl of Leicester and Coventry, and Duke of Mercia, resided at the Castle about 1050. His wife was the far-famed Lady Godiva,

“Who riding forth clothed on with chastity,
Hath built herself an everlasting name.”

This Earl and Countess left three sons, the youngest lost to history ; but the other two—Algar, the successor to the Earldom, and the renowned Hereward the Wake—were worthy sons of worthy forbears. It is probable both those eminent Saxons were born in Leicester Castle. While the English language endures, Hereward's distinction

for valiant and patriotic deeds will be vividly enshrined in the pages of history, romance, and song.

Algar, Earl of Leicester, succeeded to the Dukedom of Mercia, and his daughter, the beautiful Alghitha, was wooed and won by the Welsh King, Griffith. Queen Alghitha would probably spend much of her childhood with her grand-parents, the great Leofric and Lady Godiva, at Leicester Castle.

Towards the close of the reign of Edward the Confessor, the famous Godwin, Earl of Wessex, was succeeded by his son Harold, who led the English forces against the Welsh under their King, Griffith. A long struggle ensued ; the latter was defeated, and afterwards assassinated by his followers. Queen Alghitha was made captive, and Harold, after ascending the throne, made her his Queen. The felicity of their married life was of short duration, for within two years King Harold, the last of the Saxon Kings, was slain at the memorable Battle of Hastings.

Thus the "peerless" Alghitha, or, under her Norman designation, Edith the Fair, became successively the wife, Queen, and widow of two Kings, rivals on many a sanguinary battlefield, and each of whom met with an untimely death.

After Harold fell, Earls Edwin and Morcar, the brothers of Alghitha, the "Swan-necked Queen," sent her to Leicester Castle, the home of her maidenhood. When the Conqueror arrived, and seized the 27,000 acres comprising her estate, she retired to the cloister, living during the major

portion of William's reign. This unhappy lady (daughter of one and sister of another Earl of Leicester), the last Saxon Queen of England, endowed to a marvellous degree with "the fatal gift of beauty," died and was buried at Stortford, in Hertfordshire, where she was "worshipped as a saint, under her Saxon name of Alaritha."

Earl Edwin, being also Duke of Mercia, was able, through his powerful influence, to render the Conqueror conspicuous service by inducing a considerable part of the country to acknowledge his sway. As a reward, the Conqueror promised his daughter in marriage. But William having failed to carry out his undertaking, Edwin, with his brother Morcar, gathered round them many of the warriors who had fought at Hastings, and raised the standard of revolt. A pitched battle ensued, the Saxon Earl being completely defeated. Subsequently the brothers were treacherously killed. Thus, notwithstanding the Norman Conquest of Leicester in 1068, it was not until 1071 that Edwin, the last Saxon Earl of Leicester, was slain.

CHAPTER VI.

NORMAN PERIOD, A.D. 1068-1265.

WHEN the Norman hosts assailed Leicester, the title of city, held (if we date from B.C. 844) for nearly two thousand years, appears to have been lost, possibly as a punishment for the bravery of the inhabitants and the stubborn resistance they offered to William the Conqueror, who took the city by storm in 1068, about two years after the Battle of Hastings. In the assault a large portion of the city was destroyed, along with St. Mary's Church. William handed the Government over to the tender mercies of Hugo de Grentemaisnil, one of the Norman adventurers.

Although applications have been made from time to time to the Government, the title of "city" has never been restored.

Even after the Conquest, Leicester continued to experience a troublous time. When

". . . the mighty Conqueror,
By a mightier overcome!"

had passed away, a dispute arose as to his successor. Grentemaisnil, Governor of Leicester, favoured Robert Curthose, the Conqueror's eldest son and Duke of Normandy. William Rufus, the Red King, raised an enormous army, and the

town was sacked and laid in ruins by his forces, A.D. 1088. Grentemaisnil was disgraced, and dispossessed of his Governorship, a heavy fine being also inflicted. He retired to an Abbey in Normandy, where he became a monk, and died a few years later.

The Earldom of Leicester was conferred on Robert de Beaumont in 1107. Robert (Blanchmains), who succeeded to the Earldom in 1169, for some reason entered into a conspiracy against King Henry II. The King's forces, under Richard de Lucy, High Justiciary of England, and Reginald, Earl of Cornwall, attacked Leicester, and made a desperate onslaught, in 1173. The walls were destroyed, and dreadful damage done on this occasion, which is known as the "Great Siege of Leicester." Two years later, the Castles of both Leicester and Groby (near Leicester) were demolished.

Leicester continued to be the residence of the Norman Earls from the Conquest to the time of the celebrated Simon de Montfort, Earl of Leicester, and Lord High Steward—a hereditary dignity then pertaining to the Earldom of Leicester.

Simon de Montfort's gift of a large estate, known as the "Cowhay," or South Fields, has preserved for the benefit and enjoyment of the inhabitants for ever the large open space now known as Victoria Park.

NORMAN EARLS OF LEICESTER.

Succeeded
to
Earldom.
A.D.

ROBERT DE BEAUMONT	(First Norman Earl, whose badge of a cinque-foil upon ermine became, and has since remained, part of the town coat of arms. The Wyvern, or Griffin, was added more than a century later. The title of Lord High Steward of England was conferred on the Earls of Leicester, and made hereditary)	- - - -	1107
ROBERT (Bossu)	(Founder of Leicester Abbey, A.D. 1143)	- - - -	1118
ROBERT (Blanchmains)	(Friend and companion of Richard, Cœur de Lion, during the crusades. Rebelled against Henry II.)	-	1169
ROBERT (Fitz Parnel)	(Meeting of Barons at Leicester Castle, against King John, A.D. 1201)	- -	1190
SIMON DE MONTFORT (the elder)	(In right of his Countess, Amicia, the sister of Robert Fitz Parnel)	- - - -	1204
SIMON DE MONTFORT	(Founder of English Parliaments, slain at Evesham, A.D. 1265)	- - - -	1218

CHAPTER VII.

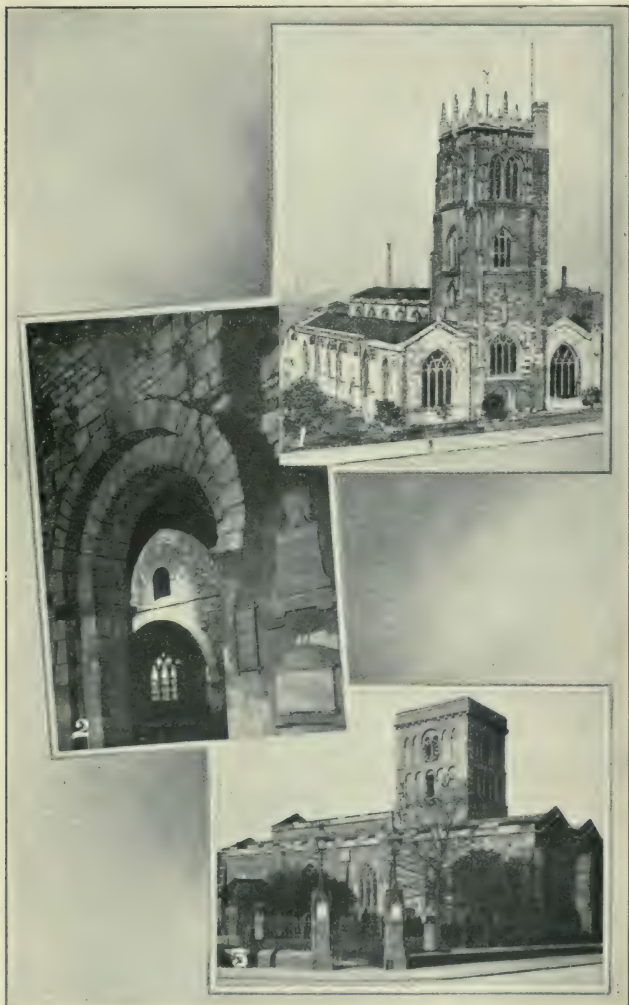
THE PLANTAGENETS.

AFTER Simon de Montfort, there followed a succession of Plantagenet Earls of Leicester, the sixth being the renowned John of Gaunt, also Duke of Lancaster.

His (John of Gaunt's) patronage of the Lollards, and of Wycliffe, the "Morning Star" of the Reformation, led to his being thoroughly hated in ecclesiastical circles in London. When the people rose in tens of thousands, under Wat Tyler, in 1381, John of Gaunt was wrongly, but unfortunately, suspected of being the author of the obnoxious poll tax, and the mob proceeded to burn and destroy his beautiful Palace of the Savoy, "the fairest structure in England," with all its inestimable art treasures.

Wycliffe's eloquent voice was heard in St. Mary's Church, adjoining and within the grounds of Leicester Castle. John of Gaunt afterwards conferred the Rectory of Lutterworth, near Leicester, upon Wycliffe, and he held it for about ten years. His adherents increased rapidly, but his efforts for religious liberty excited a great amount of persecution. His sudden death, in 1384, probably saved him from being burnt as a martyr at the stake. His body was afterwards exhumed and burnt, the ashes being thrown into the River Swift. It has been remarked that

THE
CATHEDRAL
CITY
OF
DURHAM



1. St. Margaret's Church. (Built on site of the old Cathedral.)
2. Saxon Window in St. Nicholas' Church.
3. St. Nicholas' Church. (Occupying the site of ancient British and Roman religious structures.)

LEICESTER



1. St. Mary's Church, and Turret Gateway entrance to Castle.
2. St. Martin's Church.
3. Leicester Castle. (In "olden times.")

UNION OF CALIFORNIA



1. Newarke Gateway and Magazine.
2. Kirby Muxloe Castle.
3. Entrance to Courtyard of Leicester Castle.



1. The old "Parliament House" in Leicester.
2. Heraldic device on "Parliament House."
3. The old Town Hall. (Where Shakespeare is said to have acted in his own plays.)

“they flowed thence into the Soar, the Trent, the Humber, and the ocean, and were thus distributed throughout the world.”

Leicester Castle was a favourite seat of John of Gaunt, and the residence of the Plantagenet Earls and Dukes of the House of Lancaster. After the death of John of Gaunt, his son, Henry of Bolingbroke, the last Plantagenet Earl of Leicester, succeeded to the Crown, as King Henry IV. of England, in 1399. From him, through this event, the Kings of England and his present Majesty, King George V., thus derive the title of Duke of Lancaster.

Referring to this important event, the late William Napier Reeve, Esq., in his “Chronicles of the Castle, and of the Earls of Leicester,” says :—

“There were no more Earls of Leicester, and thenceforth to none of that name belonged the Castle of Leicester, or the town thereof, or any possessions therein, or anything pertaining thereto, for they who were afterwards called Earls of Leicester were strangers to the Town and County of Leicester, and of no account therein. But, even as the glory of the sun is greatest at its setting, so did the grandeur of the last Earl of Leicester surpass that of all who had gone before him. For the Earldom ceased, not by the failure of male issue, as in the days of Henry, the good Duke ; or by attain of treason, as in the days of Simon ; or by the hand of violence, as in the days of Thomas the Earl, but because the glory of the Earldom was merged in the greater glory of the Crown.”

PLANTAGENET (OR LANCASTRIAN) EARLS OF
LEICESTER.

Succeeded
to
Earldom.
A. D.

EDMUND (Crouchback)	(Earl of Lancaster.) (Leicester's "Great Charter" granted 1278. Assizes first held at Leicester Castle)	1265
THOMAS (Earl of Lancaster)	(His crest of Wyvern, or Griffin, was added to the town arms. Headed the Barons against King Edward II. Meeting at Leicester Castle of King, Queen, Barons, and two Cardinal Legates from the Pope. Beheaded 1322)	1299
HENRY (Earl of Lancaster)	(The "Great" and "Good" Earl. Founded Trinity Hospital, Leicester, 1331)	1322
HENRY (First Duke of Lancaster)	(Known as the "Good" Duke. Dukedom conferred for eminent bravery during the war in France)	1345
WILLIAM OF BAVARIA	(Earl of Leicester in right of his wife, Lady Maud, eldest daughter of the "Good" Duke)	1361
JOHN OF GAUNT ("Time-honoured Lancaster")	(Fourth son of Edward III., Duke of Lancaster in right of his wife, Lady Blanche, the youngest daughter of the "Good" Duke)	1377
HENRY OF BOLINGBROKE	(King Henry IV. of England. Richard II. deposed)	1399

The Earldom of Leicester, after being merged in the Crown, was later on revived in another family, and in Queen Elizabeth's reign, Robert Dudley, Earl of Leicester, figured as one of her principal Ministers. The holder of the present title, created in 1837, is Thomas William Coke, but his family has no connection with the town beyond holding the title.

CHAPTER VIII.

LANCASTRIAN AND YORKIST PERIOD, A.D. 1399-1485.

THE feuds arising through Henry of Bolingbroke, Earl of Leicester, becoming King of England, as Henry IV., eventuated in the Wars of the Roses, in 1451.

This period was a most eventful one for Leicester. A series of battles were fought at St. Albans, Blore Heath, Northampton, Wakefield, Mortimer's Cross, Bernard's Heath, and Towton. In all these actions the men of Leicester bore their full part. Notwithstanding that the Earls of Leicester were Lancastrians, our townsmen fought at the bloody Battle of Towton, in 1461, under their own banner, bearing the Town Arms, on the Yorkist side. Presumably that was through the great local influence of Sir William Hastings, of Kirby Muxloe Castle, near Leicester. The result was a decisive defeat of King Henry VI. and the Lancastrians, and their supremacy ceased after occupying the throne about sixty-two years.

The Yorkist victor, King Edward IV., married Lady Elizabeth Grey, whose husband, a Lancastrian nobleman, had fallen during the war. This lady won the heart of the King whilst pleading earnestly before him for the restoration of her dead husband's lands. Happily, this marriage

led to a union of the Houses of York and Lancaster, and thus heralded the end of the Wars of the Roses.

King Edward IV. visited Leicester more than once, and granted to the town an important Charter (1462), referred to elsewhere.

CHAPTER IX.

PARLIAMENTS HELD IN LEICESTER.

PARLIAMENTS have assembled several times in Leicester. Owing to the resentment aroused against King John, the Barons met here to confer on matters of State in 1201. This was notable as the first of many turbulent meetings of the Barons, which culminated in obtaining Magna Charta, from King John, in 1215. Another Assembly of Parliament was held at Leicester in 1224, in the reign of Henry III. But it reflects no small honour on the town that the first regular Parliament of England, as now constituted, was summoned in 1265 by Simon de Montfort, the great Earl of Leicester, and the founder of English Parliaments. Members of Parliament for Leicester were first chosen in 1295.

An adjourned Parliament was held at Leicester, during the reign of Edward III., in 1349, the year in which the Order of the Garter was founded. In 1414, during the reign of Henry V., the "Fire and Faggot" Parliament assembled here. At this a statute was passed for the suppression of the Lollards, and a second Parliament was held later the same year for the suppression of alien priories. Another meeting of Parliament was held in Leicester, in the reign of Henry VI., in 1426.

On account of the high tension of feeling between the partisans of the Duke of Gloucester and the fiery Beaufort, Bishop of Winchester, the wearing of swords and other weapons was forbidden, but the members substituted "clubs" or "bats" in order to evade the decree. Hence, this was called the "Parliament of Bats." The bitter and long-standing quarrel between these two powerful and imperious protagonists was amicably settled at this Parliament. The last meeting of Parliament held in Leicester was in 1450, in the same reign, being adjourned from Westminster, owing to the unhealthiness of that locality.

CHAPTER X.

ROYAL VISITS TO LEICESTER.

ROYALTY has frequently honoured Leicester with its presence, especially in earlier times, when the town was often a Royal residence. Following the legendary King Lear, and many other British Princes, came the Roman Emperors, and numerous Saxon and Danish Kings.

The Norman Kings—William the Conqueror; his third son, William Rufus, the “Red King”; and probably also Stephen, the grandson of Rufus.

The Plantagenet Kings, all of whom came on various occasions to Leicester—Henry II., and his eldest surviving son, Richard, Cœur de Lion, the valiant and famous Crusader. The weak, vacillating, and pusillanimous John, sixth and youngest son of Henry II.; and Henry III., eldest son of John. Edward I., the eldest son of Henry III.; Edward II., the eldest surviving son of Edward I.; and Edward III., the eldest son of Edward II. Richard II., son of the Black Prince, and grandson of Edward III. Richard II., after reigning twenty-two years, was deposed by the Earl of Leicester, afterwards Henry IV.

The three Kings of the House of Lancaster—also Plantagenets—namely, Henry IV., son of John of Gaunt, Earl of Leicester, and grandson of

Edward III. ; Henry V., the eldest son of Henry IV. (he held his Court here in 1414, the year of the "Fire and Faggot Parliament") ; also his only son and successor, Henry VI., who was defeated and deposed by the Yorkist King, Edward IV.

Of the three Yorkist Kings—also Plantagenets—two only visited the town. Edward IV., lineal descendant of Edward III., came several times. His Queen, the widow of Sir John Grey, of Groby Castle, near Leicester, was of the same historic family as Lady Jane Grey, the "Nine Days Queen." In 1483, Richard III. ascended the throne. He came to Leicester the same year, and remained a week at the Castle.

Two years later he returned to Leicester, in great pride and glory, with his army, to meet Henry, Earl of Richmond, whose foreign mercenaries brought the sweating sickness, which can be traced in contemporary records, from Milford Haven to Leicestershire, and thence to London. Richard spent one or two nights in the town, and then proceeded over the old Bow Bridge to the fateful field of Bosworth. The famous battle was fought on 22nd August, 1485, and afterwards Richard's body was brought to the town and buried in Grey Friars. It was subsequently exhumed, and the bones interred near the old Bow Bridge, which was built on Roman foundations. Tradition records that an old crone who saw King Richard's foot strike a cornerstone of the bridge as he proceeded to Bosworth, predicted that his head would strike the same stone on his return. This is said to have literally

occurred. An inscription on an adjacent wall overlooking the present bridge (1912) informs the visitor that—

“Near this spot lie the remains of Richard the III., the last of the Plantagenets—1485.”

Three of the six Tudor Sovereigns visited Leicester.

The Earl of Richmond, the triumphant victor of Bosworth Field, was the first Tudor King, and based his claim to the throne as a lineal descendant of John of Gaunt, Earl of Leicester. The victorious Earl was hastily crowned King Henry VII. on the field of battle. He came forward to Leicester, spending the night here, both the dead and the living Kings being in Leicester at the same time. And so ended the Wars of the Roses, which, having derived their origin and stimulus from Leicester, were also terminated on the battlefield of Bosworth, near the town. Henry VIII., the only surviving son of Henry VII., also visited Leicester. The Abbey was dismantled, with other religious houses, during his reign.

On the premature death of Edward VI., in 1553, the accomplished, beautiful, gifted, and virtuous Lady Jane Grey, of (old) Bradgate House, Leicester, the “Nine Days Queen,” was, unfortunately for herself, and against her desire, put forward by the ambitious, crafty, and designing Duke of Northumberland, her father-in-law, as a claimant to the throne. Lady Jane was a frequent visitor to Leicester. Her brief reign was followed

by the martyrdom of herself and her husband, Lord Guildford Dudley, after the violent and brutal manner of the times. They were buried side by side in the Church of S. Peter ad Vincula, within the Tower.

The ruins of the house where she lived form an attractive feature in Bradgate Park, although they are now crumbling to decay. The Chapel containing the tomb, surmounted with the recumbent effigies of Lord Henry Grey and his Lady, are both in a good state of preservation.

Neither Mary I. nor Queen Elizabeth visited Leicester, although on several occasions preparations were made when Elizabeth was expected. Her Royal prisoner, Mary Queen of Scots, mother of James I., was in Leicester more than once during the long period of her travels and eventful captivity.

All the Stuarts visited Leicester—namely, James I.; and his only surviving son, Charles I., the latter on many occasions. The two sons of Charles, Charles II. and James II.; also William II.; and Queen Anne. During the Commonwealth Oliver Cromwell was in the town more than once, and his son, Richard, also came.

Of the House of Hanover, none of the Georges were known to have visited Leicester, although the Dowager-Queen Adelaide came in 1839, 1840, 1842, and 1843. Queen Victoria, with Prince Albert, paid a visit in 1843, on returning from Belvoir Castle.

They passed through again in 1850, en route to Scotland. King Edward VII. was here often

when Prince of Wales. Also King George V., when Duke of York, visited Leicester with his father, at the Royal Agricultural Show, in 1896. On one of King Edward's visits, to open the Abbey Park, on Whit-Monday, 29th May, 1882, Queen Alexandra (then Princess of Wales) accompanied him. It was an appropriate feature of the ceremonies that, being "Royal Oak Day," the Princess planted an oak tree in the Park, which has grown well and "flourished exceedingly."

CHAPTER XI.

TUDOR PERIOD, A.D. 1485-1603.

HENRY VII., lineal descendant of the Earls of Leicester, and the first of the Tudor Kings, granted what, from its importance, may be considered a Special Charter, requiring the Mayor and his brethren, and the Bailiff, to select forty-eight of the most "wise and sad commoners," to transact the public business of the town. These replaced the ancient Guilds; and also, at a later date, the whole of the assembled Burgesses, whose tumultuous proceedings led to much confusion. This municipal reform, strongly resented at the time by the populace, was afterwards embodied in an Act of Parliament, in 1490. The powers conferred were further amplified before the end of the reign, and "wages" were ordered to be paid to the Justices, as in other places.

With the cessation of the Civil War, local public benefactors arose. William Wigston, or Wyggeston, a successful merchant, who inherited considerable wealth from his predecessors, left a great endowment for certain of the poor of Leicester, and is regarded as one of the principal benefactors of the town. This bequest has proved of inestimable benefit to the poor (both past and present), and its advantages will continue to future generations. Letters Patent were obtained

by him in 1513, from Henry VIII., but the work of erecting the Hospital which bears his name was not completed until 1520—after the testator's death. Part of the fund is now also applied to educational purposes.

Sir Thomas White, a successful London merchant, an Alderman of the City of London, and its Lord Mayor in 1546, presented a sum of money to the Mayor and Corporation of Coventry, the proceeds of which were to be used in free loans for the benefit of young freemen of Coventry, Leicester, Northampton, Nottingham, and Warwick. This beneficent bequest has been instrumental in securing success in life to many a young Leicester tradesman.

Hugh Latimer, the famous English prelate, a later "Star of the Reformation," was born at Thurcaston, near Leicester, in 1472. He was burnt at the stake, with another martyr, Ridley, in 1555. This event recalls the tradition that, as the flames leapt higher and higher, such was the old man's amazing steadfastness and superbly intrepid demeanour, that he cheered his fellow-sufferer with the memorable words—"We shall this day, my lord, light such a candle in England as shall never be extinguished."

During the reign of Queen Mary I., a young man named Thomas Moore was burned at the stake in Leicester for his disbelief in the "Real Presence," expiating his heresy in June, 1556.

Queen Elizabeth's accession, in 1558, opened up a brighter era for Leicester and for England. The Queen granted a Special Charter of Incorporation

of the Borough in 1588, which was further confirmed in 1599. This Charter, in effect, continued in force until the Reformed Corporations Act of 1835.

The year of Leicester's incorporation (1588) will be ever memorable in English history as that of the "Invincible Armada." In that hour of the country's dire need and supreme extremity, Leicester despatched 2,000 men to the camp at Tilbury. Other demands were made, and loyally responded to by Leicester. The signal defeat of the Armada was afterwards celebrated by a banquet at the Town Hall, and other rejoicings.

During Elizabeth's reign, as a member of the Earl of Leicester's company, Shakespeare himself is said to have acted here in some of his own plays at the Old Town Hall, although there is no proof by existing record.

CHAPTER XII.

LEICESTER ABBEY.

LEICESTER ABBEY, founded by Robert-le-Bossu, Earl of Leicester, in 1137, was destroyed in the reign of Henry VIII., at the dissolution of Monasteries, in 1539. It is rendered famous, *inter alia*, by the death and burial there of the Great Cardinal Wolsey, in 1530, when he called on his way to London to meet the charge of high treason, made by Henry VIII. Wolsey's pathetic words to the Abbot:—"I am come here to lay my bones among you," and his still more memorable utterance when, on the eve of expiring, he said:—"If I had served God as diligently as I have done the King, He would not have given me over in my grey hairs," will be remembered as a striking example of the evanescence of human ambition, greatness, and pride.

The Abbey Park, one of the most beautiful and attractive public parks in the Kingdom, was once part of the Abbey Estate. It was purchased by the Corporation from the owner, Earl Dysart, and, after being tastefully and magnificently laid out at a substantial cost, was opened in 1882 by the Prince and Princess of Wales.

The ruins of the Abbey and the walls are well worth visiting. The grounds are now used as Nursery Gardens, and are thus put to the same use as when the monks followed their daily avocations, in the time of Wolsey.



LADY JANE GREY.
(The "Nine Days" Queen of England.)



1. Old Bradgate House—a Restoration. (The home of Lady Jane Grey.)
2. Ruins of old Bradgate House. (In Bradgate Park.)



1. The Islands, Abbey Park. (A winter scene.)
2. The "Huntingdon Tower." (Mary, Queen of Scots, detained here.)
3. Ruins of Leicester Abbey. (Cardinal Wolsey died and was buried here, 1530.)



1. The Museum and "Via Devana." (Now incongruously called the "New Walk.")
2. The Town Hall and Town Hall Square.
3. The old "High Cross" and Prison. (Where an Anti-Vaccinator was first imprisoned.)

CHAPTER XIII.

STUART AND COMMONWEALTH PERIOD, A.D. 1603-1714.

ON the accession of James I., in 1603, his Queen and two of their children passed through Leicester, on their way from Edinburgh to London. Prince Charles, afterwards Charles I. (then only four years old), was at that time too weakly to bear the long journey, but he travelled through the town the following year.

In 1611, Leicester suffered from a severe outbreak of the Plague. Infected houses were marked with a cross, business was practically suspended, and there seemed to be no one with sufficient acumen or knowledge to cope with, or mitigate, the effects of the epidemic.

In 1612 King James visited Leicester for the first time, but subsequently he came on several occasions. In 1616 small-pox broke out in the town. Information was at once sent to King James, who was intending to pay a visit. His Majesty, however, although neither inoculated nor vaccinated, was not afraid, and came—in spite of the small-pox—and no serious consequences ensued.

An event which occurred at that visit is worth recording, as a peculiar instance of the administration of justice in those days. Nine women were

accused of exercising an unholy influence upon a boy, at Husbands Bosworth, a town in the shire. They were tried, condemned as witches, and hung on the gallows at Leicester. During the King's sojourn he sent for and examined the boy, whom he found to be quite well and unaffected by the supposed "influence." The King accidentally discovered the whole thing to be a fraud, and the judges who tried the cases were thereupon censured and disgraced. The lives of the nine poor women could not be recalled, but one beneficial effect was that five others in prison on a similar charge were forthwith released.

King Charles I. visited Leicester many times after passing through when a child. In 1634 his Queen, Henrietta Maria, accompanied him.

During the unhappy Civil War between Charles I. and Parliament, in the seventeenth century, Leicester took the Parliamentary side, and was once more the centre of war and strife. The Royal troops, under the impetuous Prince Rupert—King Charles himself being present—battered the walls and sacked the town, obtaining complete possession on 31st May, 1645. Charles remained two days in Leicester, and levied a fine of £2,000 upon the inhabitants for their rebellion and sturdy opposition. The Cavalier occupation was very brief, for on the 14th of June Cromwell's forces were victorious at the decisive Battle of Naseby, and two days later invested Leicester. A short and sharp cannonade ensued, doing further damage to the walls, when the Royalist Governor, Lord Loughborough, capitulated. After disarming the garrison, Cromwell allowed him to withdraw

with his troops to Lichfield. Cromwell, on his visits to Leicester during the Commonwealth, was well received by the Mayor and Burgesses, and is said to have thoroughly enjoyed smoking the "pipe of peace" with his worship, in the Mayor's parlour, at the Old Town Hall.

Following this long series of sieges, it is remarkable that the old city walls, which had passed through so extraordinarily chequered a history of peace and war, still survived, and even continued, although more or less dilapidated, until 1774, and some portions even to a still later date.

Tradition says that John Bunyan was a soldier in the army when King Charles I. besieged the town, in 1645. He arranged with a substitute to take his place as sentry. This man was killed by a bullet from the enemy, and that impressive incident eventuated in Bunyan's conversion, and subsequently to his writing the "Pilgrim's Progress." John Bunyan was again in Leicester, and preached by license on Sunday, 6th October, 1672. He lodged at an old house opposite St. Nicholas Church, in Shambles Lane—now St. Nicholas Street.

In the reign of Charles II., the policy of the popular party has been described as "tumultuous petitioning." Hence they were called "Petitioners," and their opponents "Abhorrrers." Those were changed, about 1680, into the more familiar names of "Whigs" and "Tories," which have since undergone a further metamorphosis.

Such was the obsequious character of the Mayor

and Town Council that in October, 1684, they actually surrendered the town's Great Charter to the King, praying him to re-grant their liberties and privileges, with such modifications as he might consider necessary. The amended Charter was returned early in December, with two significant restrictions. All members and officers of the Corporation were to be appointed subject to the King's approval and power of removal; and the number of the Common Council was reduced from forty-eight to thirty-six members.

However, it is refreshing to relate that this pusillanimity did not last very long, for an Address to James II. was proposed in October, 1687, and notwithstanding that the Corporation was composed of Court nominees, it was rejected by 34 votes to 19. This was, no doubt, owing to the suspected designs of James to restore Roman Catholicism.

Thereupon James, on 9th February, 1688, ordered the dismissal of several members of the Corporation, substituting others in their places. Shortly afterwards the King's declaration as to liberty of conscience was published.

Another attempt was then made to induce the Corporation to present an Address to His Majesty. Although all present held appointment by the King's direct warrant, only three persons voted for the Address, all the other members voting solidly against it.

The landing of "William the Deliverer," at Torbay, on 5th November, 1688, ended, once for all, the misgovernment and incapacity of the ill-fated Stuart dynasty.

CHAPTER XIV.

LEICESTER'S ANCIENT CHARTERS.

LEICESTER is entitled to, and holds, a separate Assize from that of the shire. In all probability that is through a grant made by Robert de Beaumont (or Medland), Earl of Leicester, 1107-1118, which abolished trial by "combat," and revived a still more ancient privilege, of the citizens' right of trial by jury, "that all pleas happening to the Burgesses of Leicester should be discussed and determined by the twenty-four Jurors who were appointed in Leicester in olden time."

The earliest roll of the Merchant Guild is dated 1196, and of this every tradesman was expected to become a member. From this governing Guild gradually evolved the Municipal Corporation.

Leicester has had a continuous succession of Mayors since 1208, although the title of Mayor did not supersede that of Alderman as chief civic dignitary until 1251, when Peter Fitz-Roger was called Mayor for the first time. The office of High Bailiff is probably even more ancient. Leicester is almost the only town retaining that title, the modern name of Sheriff having elsewhere taken its place. Charters and Letters Patent for fairs and the promotion of commerce and other privi-

leges date from the twelfth century, and others were granted in 1224 and 1305.

King Edward IV. granted, in 1462, a Special Charter for the appointment of Magistrates and a Recorder for the Borough. That was also endorsed with authority to appoint Coroners.

Leicester possesses, in the Muniment Room, at the Municipal Buildings, one of the richest, most valuable, and interesting collections of official documents to be found in the country :—Charters and Letters Patent dating from the twelfth century; Guild Rolls from the time of Richard I. ; papers of various kinds illustrating the career of Simon de Montfort and his Plantagenet successors, Earls of Leicester ; Chamberlain's accounts from Henry VIII. to George III., and other official literature relating to the municipal and domestic interests of the people of Leicester in the sixteenth, seventeenth, and eighteenth centuries. Amongst these precious and invaluable belongings are a Latin Bible of the fifteenth century ; the famous Codex Leicestrensis ; a manuscript of the New Testament in Greek ; the Vellum Book, an ancient Chartulary of the Borough of Leicester ; and numerous other valuable books and documents, including Royal Charters from the reign of King John, as well as Charters of the long line of Norman and Plantagenet Earls of Leicester and Dukes of Lancaster.

CHAPTER XV.

HANOVERIAN PERIOD, A.D. 1714-1837.

COMPARED with the stirring and important events previously related, which, as will have been observed, were of a national almost more than of a local character, Leicester, under the Hanoverian Kings, enjoyed a somewhat dignified repose. Leicester men sustained an honourable share in the Continental, American, Napoleonic, and Crimean Wars, and the struggle following the Indian Mutiny. From about a century later than the time of the Charter of Incorporation granted by Elizabeth, in 1588, the material progress of the town was both uninterrupted and rapid. Remote from disturbing national events, a period of expansive internal commercial and intellectual development and enterprise ensued.

Alderman Gabriel Newton, Mayor of Leicester in 1736, another local benefactor, will ever be held in grateful memory for the benefits conferred on so many Leicester boys by his munificent educational bequest. His school was founded in 1761.

Many other public buildings and schools were erected during the years 1748-1781.

About a century after Bunyan's visit, another remarkable man and well-known religious reformer, John Wesley, lodged at the same house during

his propagandist mission at Leicester, in 1777. That historic dwelling was pulled down only a few years ago. Wesley again visited Leicester in 1779 and 1783. On two of these occasions after preaching the previous day, he held a service in the "Tabernacle," then situated in Millstone Lane, at five o'clock in the morning. Evidently the ministrations of grace were eagerly sought after in those days!

Nearly a century later, Charles Spurgeon's eloquent voice was heard at an open-air service in Leicester Market Place at 6 a.m.

In 1774 the strong Puritan feeling prevailing in Leicester led to the formation of an association to enforce the law against dramatic entertainments. This caused considerable hardship to the players. In the following year, Mr. and Mrs. Siddons appeared at Leicester in the "Queen of Tragedy." Mrs. Siddons had not at that time acquired her great fame. Wesley's second visit is said to have been paid within a month of the departure of the famous actress from one of her engagements in the town.

John Howard, the philanthropist, visited Leicester Prison and other institutions, in 1787, with a view to their improvement.

In 1789 Richard Phillips, a teacher of mathematics and other sciences, opened a book store and a pamphlet room, where the works of Thomas Paine and other writers advocating Republican and Free Thought principles were provided for public perusal. He also endeavoured to establish a Literary Society; and on the 1st of July, 1790,

he founded a Library, which has survived in the present Permanent Library of Leicester. The times were not then ripe for the Literary Society to flourish. It did not take root, and not until 1835 was this idea revived by the present Literary and Philosophical Society. Phillips also published the "Leicester Herald," the second newspaper issued in the town.

In 1793 he was prosecuted for selling Paine's "Rights of Man," and sentenced to eighteen months imprisonment in Leicester Gaol. After his release from prison, in 1795, his premises, with its stock of valuable books and scientific instruments were unfortunately destroyed by fire, and the publication of the "Herald" ceased. His loss was, however, covered by insurance. He afterwards removed to London, where he became so eminent that he was made a Sheriff of the City, and received a Knighthood from King George III.

A singular incident happened to Sir Richard's son some time after his arrival in London. William White, in his exhaustive work, "The Story of a Great Delusion," quotes at page 312 from William Cobbett's papers, "Advice to Young Men." Cobbett alludes to hundreds of cases of persons "Cow-poxed by Jenner himself," who have afterwards caught small-pox, and some of them died from the disease. Amongst others, he mentions "Sir Richard Phillips, whose son, several years after Jenner had given him the insuring matter, had a very hard struggle for life, under the hands of the old-fashioned, seam-giving, and dimple-dipping small-pox."

In 1792 the Leicester Navigation Act was obtained, and in 1794 two boats arrived laden with merchandise, from Gainsborough. They returned to Gainsborough with wool and other commodities.

Leicester is a recognised and important agricultural centre. Fairs are still held at stated times for the sale of wool, cheese, horses, sheep, and cattle, for which products and animals the town and county have long been famous.

Leicester has been celebrated for its Hosiery from time immemorial, and one of the hosiery firms is the largest in the world. The introduction of machinery into this industry, early in the nineteenth century, in North Leicestershire and Nottinghamshire, led to rioting and terror, and several of the "Luddites," as the malcontents were called, were brought to trial, convicted, and hanged at the "new drop" at Leicester, on 17th April, 1817, six being executed at one time.

In the same year (1817) the Savings Bank was established, and flourished until the crisis of 1847-48, which severely taxed its resources. It weathered the storm, and is now one of the most prosperous and useful institutions in the town.

In 1821 the town, which up to that time had been partially illuminated with oil lamps, was first lighted by gas.

In 1832 the Leicester and Swannington Railway was ready for traffic, being the second passenger railway opened in the Kingdom. Coal was first brought into the town by rail in that year from the Swannington Collieries.

CHAPTER XVI.

VICTORIAN PERIOD, 1837-1912.

ALTHOUGH properly belonging to the Hanoverian Period, the reign of Queen Victoria was so long and glorious, so pregnant with progress in every department of the country's history, that it has extended beyond the limits of her reign, and merits separate treatment.

With the more popular representation of the people, secured by the Reform Act of 1832, and the Municipal Corporations Act of 1835, fresh impulse was imparted to the public life of the country at large, and especially to the reformed Boroughs. In that general advancement Leicester naturally shared.

The advent of newspapers in the town also tended to the diffusion of knowledge. The "Journal" was published on 12th May, 1753; the "Herald" in 1789; the "Chronicle" in 1791; and the Leicestershire "Mercury" in 1836.

The "Advertiser" appeared on 1st January, 1842; in 1857 the "Guardian" was started; whilst in the same year the "Chronicle" and "Mercury" were united. The "Midland Free Press" was removed from Kettering to Leicester in 1858. In 1872 the "Daily Post," the first daily paper, was issued.

Since that date other papers have been launched, and some discontinued. There are now three daily papers—the “Daily Post” in the morning, and the “Mercury” and the “Mail” in the evening. Another weekly paper, the “Pioneer,” was started in 1900.

In these days of innumerable “excursions,” it might be well to record that the system of cheap trips had its humble birth in Leicester. The Midland Counties Railway opened on 5th May, 1840, and the initial railway excursion in the world was a trip on 5th July, 1841, from Leicester to Loughborough, at a return fare of one shilling. That was organised by the late Mr. Thomas Cook, of Leicester, the eminent founder of the great firm of Thomas Cook and Son. From so small a beginning has grown the present gigantic excursion systems, with ramifications embracing the whole world. It is a reflection upon the excursion-loving public that a monument has not yet been erected to commemorate the achievement of the late Thomas Cook.

In 1843, the year of the disastrous failure of Clarke, Mitchell, Phillips, and Smith’s Bank, a manufacturer named Brampton experimented with indiarubber fasteners for gloves. He submitted his invention to Mr. Caleb Bedells, who, promptly recognising its value, also applied it to boots and shoes. This led to important results and enormous developments. Thus the world-wide Elastic Web industry was inaugurated at Leicester. It is singular that this article should have been applied to the coverings for both the hands and the feet.

In 1849 the Town Museum, on the New Walk, was opened, and in the same year the Leicester Chamber of Commerce was established for the furtherance and extension of trade.

Another important industry was commenced in Leicester, about 1851, the year of the first great International Exhibition in London. A number of shoemakers settled here, and work commenced at premises in Cank Street, under a Northampton firm. When "riveting" took the place of "sewing," an enormous business was founded by Mr. Thomas Crick, whose name, as the pioneer, will always be associated with this industry, and also with his benevolent bequest of alms-houses at the "Retreat," Great Glen. This industry has flourished so enormously that Leicester has not only the largest firm engaged in this trade, but has become the greatest boot and shoe centre in the world, over 40,000 persons being engaged in this business.

Appropriately, side by side with the shoe industry, Mr. Henry Davey founded that of "last" making, at Leicester, in 1750. The business then established in this article—so closely allied and practically a component part of shoemaking—has continued to grow, and now flourishes in our midst, under modernised conditions.

By an extraordinary coincidence, the Hat and Cap industry was introduced about the same date, by Mr. Thomas Webster. Thus two industries providing coverings for the head and for the feet were practically established together at Leicester.

Engineering works, particularly those con-

nected with the production of shoe machinery, are amongst the most extensive and famous in the world.

Leicester became associated with the Chartist movement in its early days, and Feargus O'Connor, one of the pioneers, delivered an inflammatory address in the Market Place in 1838. Thomas Cooper, a Leicester man, and Republican writer, became its local leader. He was prosecuted and imprisoned, at Stafford, in 1842. During his incarceration he wrote the "Purgatory of Suicides." The six points of the Charter were:—Manhood Suffrage; Vote by Ballot; Annual Parliaments; Equal Electoral Districts; Payment of Members; and the Abolition of the Property Qualification. Three of these are now (1912) the law of the land, and it is possible that one or more of the other three will follow suit.

That gifted and brilliant literary genius, Thomas Babington Macaulay, was born at Rothley Temple, near Leicester, 25th October, 1800. It is said that he was not only a writer of history at seven years of age, but he learned, and could repeat from memory, the whole of Milton's "Paradise Lost." His distinguished career as an orator in Parliament, and as an author, historian, and poet, induced Lord Palmerston to offer him a peerage in 1857. He took the title of Lord Macaulay of Rothley, but enjoyed it only a brief period, for he died on the 28th of December, 1859, and was buried in Westminster Abbey, 9th January, 1860. It is a singular coincidence that he, being born near Leicester, should write his well-known, and oft-quoted, phillipic on small-

pox, when referring to the death of Queen Mary from that disease. As an illustration of a signal error of diagnosis, and an example of medical uncertainty, it is worth quoting here. King William had been uneasy on account of the state of the Queen's health, and Lord Macaulay, in his *History of England*, Vol. IV. (1866 Edition), pages 116 and 117, wrote :—

“ Sir Thomas Millington, who was physician
“ in ordinary to the King, thought that she had
“ the measles. But Radcliffe, who, with coarse
“ manners and little book learning, had raised
“ himself to the first practice in London chiefly by
“ his rare skill in diagnostics, uttered the more
“ alarming words—small-pox. That disease, over
“ which science has since achieved a succession of
“ glorious and beneficent victories, was then the
“ most terrible of all the ministers of death. The
“ havoc of the plague had been far more rapid ;
“ but the plague had visited our shores only once
“ or twice within living memory, and the small-
“ pox was always present, filling the churchyard
“ with corpses, tormenting with constant fears all
“ whom it had not yet stricken, leaving on those
“ whose lives it spared the hideous traces of its
“ power, turning the babe into a changeling at
“ which the mother shuddered, and making the
“ eyes and cheeks of the betrothed maiden objects
“ of horror to the lover. Towards the end of the
“ year 1694, this pestilence was more than usually
“ severe. At length the infection spread to the
“ palace, and reached the young and blooming
“ Queen. She received the intimation of her
“ danger with true greatness of soul. She gave

“orders that every lady of her bed-chamber, every
“maid of honour—nay, every menial servant—
“who had not had the small-pox should instantly
“leave Kensington House. She locked herself up
“during a short time in her closet, burned some
“papers, arranged others, and then calmly awaited
“her fate.

“During two or three days there were many
“alternations of hope and fear. The physicians
“contradicted each other and themselves in a way
“which sufficiently indicates the state of medical
“science in that age. The disease was measles ;
“it was scarlet fever ; it was spotted fever ; it
“was erysipelas. At one moment some symptoms,
“which in truth showed that the case was almost
“hopeless, were hailed as indications of returning
“health. At length all doubt was over. Radcliffe’s
“opinion proved to be right. It was plain that
“the Queen was sinking under small-pox of the
“most malignant type.”

Three remarkable men of the Baptist Church exercised considerable influence and power in the moral, spiritual, and intellectual upbuilding of Leicester, and their memory is imperishable :—

William Carey, who, raising himself from the shoemaker’s bench, became a distinguished linguist, and the pioneer missionary to India ; Robert Hall, whose unrivalled oratory and burning eloquence attracted hearers from London, who actually travelled by coach for the week-end long before the advent of railways ; and James Phillippo Mursell, who for half a century championed the cause of the downtrodden and oppressed.



1. The "Vaughn" Working Men's College.
2. The "Clock Tower." (Centre of Leicester.)
3. Leicester Technical and Art Schools.



The Great Leicester Demonstration against the Vaccination Acts, 23rd March, 1885. The day was observed as a general holiday.

The Procession, two miles in length, passing through the Market Place. One hundred thousand persons estimated to be present.

The work of those distinguished men is fittingly commemorated by a tablet, erected in 1891, at Harvey Lane Chapel, the scene of their labours, and appropriately inscribed as follows :—

“ This place of worship has been sanctified by the deathless ministry of three great men—

WILLIAM CAREY,

1789-1793.

Expect great things—attempt great things.

ROBERT HALL,

1807-1826.

Mighty in words and in works.

JAMES P. MURSELL,

1826-1845.

An ensample to them that believe.

Remember them which spake unto you the Word of God ; and, considering the issue of their life, imitate their Faith.”

From the roll of illustrious men who have helped to mould the social and religious life of Leicester, four members of the Vaughan family (Edward T. Vaughan, and his three sons, Charles J., Edward T., and David J.) must not be omitted. They held in succession—with a brief break of twelve years—the incumbency at St. Martin's Church from 1802 to 1893. Their names will live in the memories of thousands who have benefited from their widely sympathetic and kindly ministrations. The last of this noble

quartet—David J., known as Canon Vaughan—voluntarily undertook the onerous and risky duty of visiting the Infectious Diseases Hospital at the time of the great small-pox epidemic in 1872, and brought spiritual comfort to the unfortunate patients there, without intermission, for the long period of more than thirty years. For that acceptable and self-denying service he is held in very high esteem, and that, of itself, constitutes an undying memorial to his honour.

He also, from his deep sympathy with the working men, and by reason of recognising their lack of educational facilities, in March, 1862, established the "Working Men's College." Many of those who availed themselves of the privileges thus afforded afterwards became leading citizens of the Borough. The founder saw this useful institution flourish, and a scheme propounded for the erection of a noble and imposing building on the site of the old County National School. He did not live to see the work completed, but the institution is most appropriately named after its founder. The memory of this noble and lovable man is perpetuated by the "Vaughan Working Men's College," the jubilee of which was celebrated this year (1912).

Another Leicester worthy, who by reason of his great and good works deserves to be specially mentioned, was the Rev. William Fry, M.A., better known as Canon Fry. He was born in 1790, and died in 1877. He held successively the Curacies of Markfield (1824), Braunstone (1831), and Kirby Muxloe (1832-47). He was deeply moved by the lamentable and deplorable lack of

education, and anxious to provide a remedy. His marriage in 1840 to Miss Isabella Moore—a wealthy lady—who not only sympathised with his ambition, but entered heartily into her husband's self-imposed task, enabled him to devote his time almost exclusively to educational work. He commenced to solve the problem by undertaking the personal training of masters, mistresses, and teachers, at a school erected for the purpose, as well as at his own house—which really became a training college. For many years he was consulted on all matters affecting the education of the young people of the town; indeed, he may be said to have become the Director of Public Education in Leicester. In the “hungry forties,” long before we had any national system of education, Canon Fry gave his whole energies to the cause of the education of the children, and he was the principal promoter of the erection of most of the public elementary schools in the town prior to Mr. W. E. Forster's Education Act of 1870. Through his instrumentality the schools of St. John's, St. Matthew's, and those in Ashwell, Deacon, Kent, Knighton, and Laxton Streets were built and equipped. In 1856 a sum of £1,000 was presented to him in recognition of his educational services. He also took a very prominent part in Church extension, by aiding in the building of St. John's (1853), St. Andrew's (1862), St. Matthew's (1867), and St. Luke's (1868). Most appropriately, Canon Fry was elected a member of the first School Board for Leicester. His devotion and industry were unbounded, and the value and memory of

his work will long be cherished by many Leicester men and women, whose only opportunity for learning was provided through Canon Fry's liberality and enlightened regard for the welfare of his fellow-citizens.

Amongst other eminent men associated by ties of birth, family, or residence in Leicester or County are :—George Fox, Robert Herrick, Robert Burton, Samuel Johnson, Lord Byron, Colonel Fred Burnaby, Lord Kitchener, and last but not least, Professor Alfred Russel Wallace. Nor must we forget that the Biggs, Ellis, and Harris families have not only made their mark, and used their beneficial influence on the history of Leicester, but members of each have either represented the Borough or other constituencies in Parliament.

Leicester's growth may be gathered from the appended figures :—Its area in Roman times was about 130 acres ; after the extension, in 1835, it covered 3,030½ acres ; by a further extension of the Borough Boundaries, in 1891, it increased to 8,582½ acres.

Year.	Population.	Year.	Population.
1712 - - -	6,450	1861 - - -	68,638
1801 - - -	17,005	1871 - - -	95,823
1811 - - -	23,146	1881 - - -	123,146
1821 - - -	31,036	1891 - - -	177,353
1831 - - -	38,904	1901 - - -	212,498
1841 - - -	50,806	1911 - - -	227,634
1851 - - -	60,760		

According to the Census of 1911, Leicester is fifteenth in size as to number of inhabitants amongst the ninety-four largest towns of England and Wales.

There has been a corresponding growth in Rateable Value and in Commerce, whilst the advancement of Science and Education has kept pace with both. Leicester's enterprise is emphasised by its possession of splendid Municipal Offices in a building regarded as one of the finest examples of Tudor architecture in England. Its public Free Libraries; its noble Museum and Art Gallery; its Council Schools, akin to palaces—all indicate its forward aim for educational facilities. It possesses large Markets, fine Public Baths, which, with the Gas, Electric Light, and Water undertakings, prove its endeavour to promote the public weal. It has constructed, at enormous cost, great Flood Works, with extensive Sanitary and Sewerage schemes to secure the better health of the people. Its magnificent Banks and fine modern Railway Stations minister to commerce. Ample provision has also been made for those painful, but unfortunately necessary, concomitants of civilised life—a Mental Hospital, a Workhouse, an Indigent Hospital, the Isolation Hospital, the free—now the Royal—Infirmary, Poor Boys' and Girls' Homes, a Cripples' Guild, and Convalescent Homes for Men and Women.

Its progress may be seen in its abundant open spaces and Public Parks; its Monuments to men of light and leading; its widened and improved Streets; its splendid means of communication, both by road and rail; the palatial Mansions of its leading inhabitants, and the colossal Manufactories of which it is able to boast. The numerous and beautiful Churches, Chapels, and Schools are evidence that Religious and Scholastic

requirements are well provided for, while the fine buildings which comprise its Technical and Art Schools, combine to prove that Art and Science go hand-in-hand with successful commercial enterprise.

Happy the people now living under such conditions, and signs of affluence, of health, of happiness, and prosperity !

That this ancient Corporation, strengthened by mutual ties of sympathy and friendship, realising the community of interest of all classes, may henceforth pursue, with firmer step, the various avenues of public usefulness and beneficence which continually open up in the path of enlightened Progress, will be the devout wish of all who are proud to count themselves citizens of the Town of Leicester.

PART II.

LEICESTER'S AWAKENING.

CHAPTER XVII.

A NOTABLE REVOLUTION.

THE foregoing all-too-brief historical sketch shows that Leicester has taken not only an important, but often a pre-eminent, part in the national life of the country; from the remote ages of the Ancient Britons; through the long centuries of the Roman occupation; during the stirring, martial strife of the Saxon, Danish, and Norman periods; and the no less pregnant struggles for liberty which characterised the Plantagenet, Tudor, Lancastrian, Yorkist, Stuart, and the earlier reigns of the Hanoverian dynasties. It has, however, been reserved for ancient, historic Leicester to renew her youth, eclipse her glorious past, and attain a yet higher position; to be the Initiator and Prime Mover in achieving an even more notable revolution—a revolution mightier and nobler, in the sense that its example does now, and will continue still more in the future, to

powerfully and favourably affect the health and the interests of a much wider circle of the human race than any of the memorable evolutions of its past history.

Leicester has furnished, both by precept and example, irrefutable proof of the capability and influence of Sanitation, not only in combating and controlling, but also in practically banishing infectious diseases from its midst. This affirmation is subject to certain qualifications. The effects of narrow, ill-conditioned streets ; of imperfect drainage and improper dwellings ; of circumstances of environment ; and of inherited physical disability must, and will for a time, continue. These adverse elements are being gradually eliminated. Apart from those drawbacks, a town newly planned on the most up-to-date principles of space and air, and adopting the "Leicester Method" of Sanitation, could bid defiance not to small-pox only, but to other infectious, if not to nearly all zymotic, diseases.

Even for small-pox, not even the merest tyro among Jennerian votaries would now venture to claim, that vaccination could achieve all that sanitation has accomplished. This is self-evident, because even pro-vaccinists, of the most pronounced type, now supplement the Jennerian operation with the "Leicester Method" of dealing with the disease. They dare not, as aforetime, trust solely to vaccination. To do so would, on their part, be culpable, if not in the highest degree criminal, neglect.

CHAPTER XVIII.

VACCINATION AND SMALL-POX.

THE introduction from Turkey, by Lady Mary Wortley Montagu, of variolous Inoculation—then called “ingrafting”—in 1721, resulted in the practice being almost universally adopted, until it became evident that, instead of moderating the prevalence of the disease, small-pox was more widely diffused by the operation.

In the “British Medical Journal,” of 9th July, 1881, appeared the following letter:—

Whilst on a visit in the county of Dorset I was surprised to find on a gravestone in the churchyard of Piddletown the following memorial:—“In memory of George Jesty, who departed this life 23rd June, 1845, aged 63 years, youngest son of the late Mr. Benjamin Jesty, of Downshay, Isle of Purbeck, discoverer of the memorable vaccine inoculation.” Afterwards I found in the churchyard of Worth Matravers a memorial stone with the following inscription:—“Sacred to the memory of Benjamin Jesty, of Downshay, who departed this life 16th April, 1816, aged 70 years. He was born at Yetminster, in this county, and was an upright, honest man, particularly noted for having been the first person known that introduced the cow-pox by inoculation, and who, from his great strength of mind, made the experiment from the cow on his wife and two sons in the year 1774.”

If this date can be relied upon, Jesty's experiment preceded Jenner's on the boy Phipps by 22 years. I was informed that Mr. B. Jesty was a large dairy farmer.

Yours faithfully,

F. WHITWELL.

Shrewsbury, 20th June, 1881.

According to this, Jesty had practised vaccination in 1774, more than twenty years before Jenner's experiments in 1796. But Jesty used cow-pox, according to the dairymaids' belief that it prevented small-pox. Jenner knew that that idea was an error, and what he recommended was cow-pox produced by horse-grease. Dr. Pearson and others of Jenner's time used cow-pox. But Jenner (although knowing they were wrong) not only did not oppose its use, but allowed them to believe he approved, and appropriated to himself any supposed benefit derived therefrom.

Although over a century has elapsed since Edward Jenner, the Gloucestershire apothecary, obtained from Parliament £30,000 as a reward for his (supposed) discovery, yet from that time onward an ever-widening conflict has raged unceasingly as to the merits or demerits of vaccination.

Notwithstanding the innumerable failures of, and the disasters attributable to vaccination, indubitably proven, the language of the professional, financially-interested, and official supporters and apologists, remains now much the same as ever. Like the Bourbons, these strange protagonists appear to have learned nothing and forgotten nothing.

In 1798 Jenner wrote :—

“What renders the cow-pox virus so extremely singular is that the person who has been thus affected is for ever after secure from the infection of the small-pox ; neither the exposure to the variolous effluvia nor the insertion of the matter

“into the skin producing this distemper.” (“An Inquiry into the Cause and Effects of the Variolæ Vaccinæ.”)

Jenner repeated this statement, varying its form only with his frequently changing views, as to cow-pox, horse-grease, horse-grease-cow-pox, and again cow-pox (spurious or genuine), until he died in the greatest perplexity on the subject. Perhaps nothing can show the force of ingrained professional bias more than the astounding fact that as late as 1857 Sir John Simon (then Mr. Simon), as the Government's medical adviser, repeated and emphasised Jenner's absurdly erroneous contention, although not in exactly the same words, in his classic (!) “Papers relating to the History and Practice of Vaccination,” on page 51. These were actually issued by the Government to the public, in an official Blue Book, even after the falsity of the statements was fully established!!

The completeness of the change that has come over the “spirit of the dream,” in certain quarters, is abundantly shown by the fact that, whereas in Jenner's time re-vaccination was scouted as being ridiculous and superfluous, yet, as recently as 1904, a compulsory Revaccination Bill, originated by the Imperial Vaccination League, passed through its various stages in the House of Lords, but did not become law, as it was never considered by the Commons.

What, again, could more completely illustrate the irony of the present phase of the controversy, than the fact that both the hon. secretary of the Imperial Vaccination League (Mrs. Dr. Garrett-

Anderson) and the now deceased hon. secretary of the Jenner Society (the late Dr. Francis T. Bond, of Gloucester,) have declared primary infantile vaccination alone to be not only unnecessary, but practically useless? Referring to the Act of 1898, and the increased infantile vaccination which it secured, they say that this "has not prevented the occurrence of a large and increasing number of outbreaks of small-pox, chiefly among adults who have not been revaccinated. There were, for instance, recently, in eighteen months, no fewer than 480 separate outbreaks of small-pox in the United Kingdom, every one of which occasioned great expenditure of public money and considerable suffering. . . . There is a growing opinion that, in consequence of altered social conditions and improved sanitary administration, it is not absolutely necessary to have infants of a few months old vaccinated, except in the presence of epidemic small-pox." (See letter in the "Times," 25th April, 1906.) It is most unlikely that either the Imperial Vaccination League or the Jenner Society, both of which were inaugurated with a great flourish of trumpets, will long survive this significant declaration.

CHAPTER XIX.

PARLIAMENT AND VACCINATION.

AFTER various futile efforts to obtain general voluntary approval and support, Parliament was appealed to, and, following many delays, an Act was passed in 1840 to "encourage" the practice of vaccination. This was succeeded by an "obligatory" Act in 1853; by another Act in 1861; and by still more stringent compulsion in 1867. The latter is known as the principal Vaccination Act. In 1871 and 1874 other Acts followed, making the ring of compulsion close and secure.

Owing partly to agitation against this legislation, and partly to the small-pox pandemic which broke out in 1870, a Parliamentary Committee of Inquiry was appointed in 1871. But just as Dr. Johnson, when reporting the debates in Parliament, as he said, "took care not to let the Whig dogs have the best of the argument," so those who appointed this Committee "took care of Vaccination" in a similar respect. The same, indeed, may, to a very large extent, be said of the Royal Commission of 1889-96.

The Parliamentary Committee of 1871 led to nothing, except the abolition of repeated penalties by the House of Commons. But the House of Lords, by eight votes to seven, refused to agree to that ameliorative clause; so that from 1871 to

1898 the people of England endured the pain and indignity of being doubly oppressed and plundered by the haphazard vote of one irresponsible legislator !

In the "Anti-Vaccinator" of 2nd September, 1871, Mr. Pitman, the editor, refers to this incident, and quotes from the London correspondent of the "Scotsman" of 21st August, 1871 :—

"The House was so thin that it seemed a farce to divide, but a division was called. The bystanders counted 'noses,' when it was seen that parties were so evenly balanced that a bishop was the arbiter of vaccination in this nation at the present moment. The venerable Bishop of Chichester crossed the floor, and went into the lobby with Lord Redesdale."

It is affirmed that cabs were hurriedly sent in every direction to capture this additional and illustrious voter, but, however that may be, the outcome of the division decreed that this oppressive injustice should continue for yet another twenty-seven years.

CHAPTER XX.

FROM DARKNESS TO LIGHT.

WHEN the Penal Act of 1867 was passed, determined opposition immediately arose in Leicester, but at first this was limited to a very few persons, merely "a little cloud . . . no bigger than a man's hand." Penal compulsion in a matter so closely affecting the tenderest and deepest feelings of parents was regarded as a Poll Tax, of an even more obnoxious character than that which occasioned the uprising of 1381, since its effect was not only to be felt in every household and in every family, but a risky surgical operation was super-added, and ordained by law to be inflicted upon all children born into the world !

The Leicester Anti-Vaccination League was formed in 1869. The stalwart little band of pioneers, numbering less than twenty persons, laboured on, until they grew numerically to such an extent that, whereas in 1867 over 94 per cent. of the children born were vaccinated, in 1897 only 1.3 per cent. of the infants were subjected to the trying ordeal. And that low percentage of vaccinations in the last-mentioned year was arrived at in spite of—and perhaps, to some extent, as the natural outcome of—many thousands of prosecu-

tions against defaulters. These were instituted under the oppressive Act of 1867, and resulted in the infliction of fines, the levying of distress warrants, and the commitment of parents to prison. Obviously, those figures demonstrate that the people of Leicester were following the lead of the Anti-Vaccination League, and that not one class only, but all sections of the townspeople, were equally resolute in their opposition and detestation of the hateful legal enactments.

The experience of the terrible small-pox epidemic of 1871-73, when many thousands of vaccinated persons contracted the disease, and several hundreds died as the result of the alleged "protection" (!) having lamentably failed in its hour of trial, produced in the minds of the thinking people of Leicester pronounced hostility against the blood-polluting quackery, which was found to be more baneful in its ultimate results than the disease it was supposed to prevent.

It may be taken for granted that the Cause of Parental Rights was materially aided by the stringent enforcement of the law. There is nothing which a Britisher resents more deeply than an encroachment upon his personal liberty. In defence of this liberty, and for the protection of the children, innumerable public meetings were constantly held year after year in all parts of the town.

It would occupy far too much space to refer to the early pioneers of the movement outside Leicester, or in detail to all the efforts put forward; but amongst those who took a leading



Mr. CHARLES EAGLE.



Mr. JOSEPH WRIGHT.



Mr. HENRY MATTS

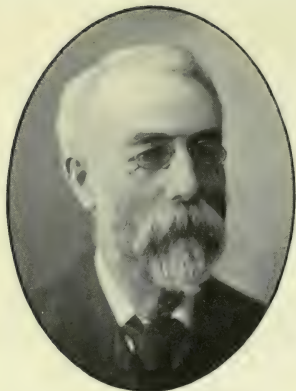


Mr. WILLIAM BALL.

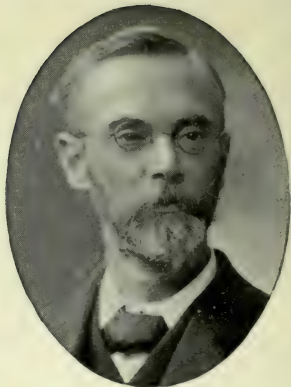


Mr. GEORGE FRITH.

All the above suffered one or more full terms
of imprisonment under the Vaccination Acts.



Councillor J. LEESON
(Guardian).



Mr. J. W. GODDARD
(Guardian).



Councillor J. LEAVESLEY
(Guardian).



Mr. S. DRINKWATER.



Mr. JAMES CATTELL.

Messrs. Leeson, Goddard, and Leavesley have
each been Chairman of the Board of Guardians.

part in the local struggle, the following names may be mentioned :—Messrs. Amos Booth, J. Cattell, S. Drinkwater, H. D. Dudgeon, C. Eagle, Wm. P. Ellmore, George Frith, J. Wallis Goddard, H. B. Halse, Elijah Jennings, F. W. Kemp, W. Lakin, Jas. Leavesley, Joseph Leeson, E. Lester, H. Matts, Jonathan North, John Potter, G. Saddington, O. B. Stanion, J. T. Stephen, and Joseph Wright.

Active steps were taken in the Police Court to defend defaulters, and protest meetings were held on all occasions when distraint sales took place, or parents were released from prison. Demonstrations against the Acts of Parliament were of frequent occurrence, and full advantage was taken of all opportunities offered by debating societies to discuss the subject.

Mr. Amos Booth's energetic and self-sacrificing efforts are worthy of special mention. The fervid vigour of his speeches aroused considerable and widespread enthusiasm, and, although often criticised for the methods he adopted, his sincerity and honesty of purpose were unquestioned and unquestionable. He did a work which few others could have accomplished, and that, too, in the early days of the movement, when it excited a great deal of obloquy and undisguised contempt from those of the so-called "superior" class—who had probably never studied the subject. Mr. Booth's was a familiar figure in police courts up and down the country, he having appeared for the defence in several hundreds of cases, and I regret that his comprehensive knowledge was not placed before the Royal Commission.

COMPULSORY VACCINATION AND ELECTIONS.

In 1881 a very large number of prosecutions took place, 1,154 parents being proceeded against. There were 918 in 1882, and these summonses—totalling to more than 2,000—created a strong feeling in the town, and evidence was not wanting that it would soon make itself effective.

The vaccination question assumed great importance at all elections for public office. One of the earliest municipal contests where the subject was brought into special prominence was in East St. Mary's Ward, in 1882, and the following is a copy of a poster that was placarded all over the Ward:—

EAST ST. MARY'S WARD.

MUNICIPAL ELECTION, 1882.

The impending contest in the above ward will no doubt be very close, but if principle guides the action of anti-vaccinators instead of party, the result is not doubtful. In October, 1876, Mr. Hughes, the candidate, speaking at a Liberal meeting, acknowledged that he had suffered severely from small-pox, although he had been vaccinated. He said:—"But if a gentleman like Mr. P. A. Taylor had sat day after day on a commission concerning the subject, and could not come to a certain conclusion upon it, he did not see how he could."

Mr. Taylor says, in the "Monthly Review," "that after examining the evidence upon which faith in vaccination was based, much to his own surprise he was led gradually to the conviction that the cherished system of vaccination was a mere delusion—a baseless superstition; that it afforded no protection from small-pox, etc., etc."

He goes on to say :—"So believing, I should have been a coward to conceal my opinion, but, far beyond this, I felt a special duty to atone for the mistake I had made in signing a report favourable to vaccination" (as a member of the Select Committee of 1871).

Mr. Hughes told the same meeting that compulsion was hard to bear, and said :—"If a small fine were imposed they would soon find out who suffered most from small-pox."

On 27th October, 1879, Dr. Lankester said he would not pledge himself, and Mr. Walker declined to pledge himself to oppose compulsory vaccination. Now, in 1882, when Dr. Lankester and Mr. Walker know the anti-vaccinators can unseat them, they moderate their language, and, apparently to catch a few votes, Dr. Lankester says he would support the repeal of the Compulsory Vaccination Acts, not because of their injustice, but because evil follows in certain cases, and so many parents pay the 10s. fine. Evidently, from his language, Mr. Walker thinks anti-vaccinators ought to pay a little, but not quite so much as now. If Dr. Lankester's seat was as safe as the doctor's in West Mary's, he would probably hold the same language as Dr. Franklin; but he bends to the coming storm. There is no political crisis in this contest for the Liberal Party. If they lose the seats, they still retain their great majority in the Council. If ever there was a time when Liberal anti-vaccinators should lay aside party for principle it is now, when, if they do not vote for the Conservative candidates, who are pledged against compulsion, they have the opportunity to abstain from supporting a vaccinating doctor and his colleague, whose alteration of opinion on this question is only dictated by a fear of losing votes.

AN ANTI-VACCINATOR.

In the result, the Compulsionists were defeated by a decisive majority.

Considerable newspaper discussion followed as to the causes of defeat, and on 6th November,

1882, the following letter appeared, amongst others, in the "Leicester Daily Post":—

OUR FIRST FIGHT.

To the Editor.

Sir,—The results of the East St. Mary's voting showed that there is still some power left in bold and open appeals to the people in defence of family rights and parental freedom. Fines, distresses, imprisonment, and all the miserable paraphernalia of our opponents must in future be fought against in the ballot box, and with the votes of determined men. Existing leaders, or place men, who fail to recognise the situation, must be made to give way to truer representatives of the prevalent feeling.

In the choice of Town Councillors we neither want masters to ride rough-shod over us nor nondescripts to sit in meek silence while the child is torn from the mother's breast and vaccinated by force before her eyes, as is now openly threatened by our exasperated antagonists.

We are on our guard. Herbert Spencer's caution has taken effect, and over us the intriguing wire-puller has lost his power. The present victory was the victory of freedom—not freedom as understood by paid speech-makers, but the freedom for which the sons of Britain fought and bled long before our miserable local divisions rendered us a prey to the designing laws of overbearing centralisation.—Yours faithfully,

H. D. DUDGEON.

5th November, 1882.

CHAPTER XXI.

MR. P. A. TAYLOR, M.P., AND PARLIAMENT.

MR. PETER ALFRED TAYLOR became Member of Parliament for Leicester in 1865. At that time Mr. Taylor was a pro-vaccinator, but, owing to the widespread and growing feeling against vaccination among his constituents, he became a Member of the Select Committee on Vaccination, in 1871. He signed the Report of that Committee, but shortly afterwards, finding he had been deceived by the character of the evidence tendered, he looked into the subject for himself, with the result that he not only abandoned compulsory vaccination, but surrendered his faith in the practice itself. On 7th April, 1879, he stated in the House of Commons:—"My opinion has "been so far modified that I could not now put "my name to the Report of the Committee, which "at the time was unanimously agreed to." He also said:—"I maintain that all the elements "justifying compulsion on the part of the State "are wanting in this instance of vaccination."

It is impossible to overrate the great services subsequently rendered by Mr. P. A. Taylor to the anti-vaccination movement. He exerted himself to the utmost to undo what he regarded as a fatal mistake in having signed the 1871 report.

On 19th June, 1883, he took advantage of an

opportunity which unexpectedly presented itself, by moving the following resolution in the House of Commons :—

“That in the opinion of this House it is
“inexpedient and unjust to enforce vaccination
“under penalties upon those who regard it as
“unadvisable and dangerous.”

To this an amendment was moved by Sir Joseph Pease, to the following effect :—“That a
“Select Committee of the House be appointed for
“the purpose of ascertaining whether a limita-
“tion of the accumulation of penalties for non-
“vaccination can be effected without endangering
“the practical efficiency of the Vaccination Acts.”

This was withdrawn, and Sir Lyon Playfair then moved :—“That in the opinion of this House
“the practice of vaccination has greatly lessened
“the mortality from small-pox, and that laws
“relating to it, with such modifications as
“experience may suggest, are necessary for the
“prevention and mitigation of this fatal and
“mutilative disease.”

The debate was carried on until a late hour, and when the division took place the result was :—

For Sir Lyon Playfair's amendment	286
Against - - - - -	16
<hr/>	
Majority - - - - -	270

The minority of 16 (with tellers, 18) were as follows :—

Arthur Arnold, Salford.

John Barran, Leeds.

R. P. Blennerhassett, Co. Kerry.

Jacob Bright, Manchester.
 Thomas Burt, Morpeth.
 Sir Thomas Chambers, Marylebone.
 Arthur Cowen, Southwark.
 Joseph Cowen, Newcastle.
 William Y. Craig, North Staffordshire.
 Robert Ferguson, Carlisle.
 John R. Hollond, Brighton.
 Charles H. Hopwood, Stockport.
 James Howard, Bedfordshire.
 Henry Labouchere, Northampton.
 Sir Wilfrid Lawson, Carlisle.
 Thomas Roe, Derby.
 J. E. Thorold Rogers, Southwark.
 P. A. Taylor, Leicester.

It is interesting to note that at the time of writing (1912) two of the above-named Members of Parliament still retain their seats in the House of Commons—viz., the Right Hon. Thomas Burt and Sir Thomas Roe—and both have been unwavering to the anti-vaccination cause through the long series of years which have passed since the incident just recorded. The last thirty years have wrought many changes in connection with the vaccination question, and those gentlemen may yet live to see the entire repeal of the existing Vaccination Acts.

An analysis of the voting showed that, although the minority were but a thirty-sixth part of the 652 members of the House, they represented one-ninth of the registered electors, and one-twelfth of the population of the United Kingdom.

A long correspondence and many interviews

between Mr. Taylor and the author ripened an acquaintance into a warm friendship, and it was with deep regret that I learned that circumstances had arisen which led to Mr. Taylor's retirement from Parliament in 1884. He, however, continued his support of the anti-vaccination movement until his decease, in 1891. No more honest politician or valiant defender of principles which he believed to be right ever represented a constituency in Parliament.

CHAPTER XXII.

WHOLESALE PROSECUTIONS—THEIR EFFECT.

PARLIAMENT having entrusted the administration of the Vaccination Acts to Boards of Guardians, it came to pass that compulsory vaccination formed a burning question, not only at Parliamentary, but at all local, and especially the Guardians', elections in Leicester. After many "skirmishes" and occasional victories, a "general engagement" took place on the subject in April, 1883, and this resulted in the return of a majority of Guardians who were pledged against compulsion. Some of these gentlemen proved false to their promises. After a preliminary encounter, the matter came up for final decision at a meeting of the Board, held on the 2nd October, 1883, when considerable excitement prevailed. The aged chairman was ill at home, but so determined were the pro-vaccinists to carry the day that the old gentleman was literally dragged from a bed of sickness to attend the momentous conclave. When the votes were counted—after a lengthy discussion—sixteen voted for prosecutions, and a similar number against. The chairman was persuaded to give his casting vote in favour of proceedings being taken. He returned home, but never recovered from the dire effects of being present on that agitating, eventful, and significant

occasion. That fateful vote led to thousands of prosecutions, and during the period of that Board's existence—viz., from 1883 to 1886—no less than 2,274 summonses were issued.

Notwithstanding this adverse vote, the anti-compulsionists were in no wise discouraged. They first managed to secure a suspension of prosecutions until after the Christmas season of "goodwill to men." Then, on the presentation of the Vaccination Returns in August, 1884, the occasion was utilised for a further trial of strength.

CHAPTER XXIII.

THE POSITION IN LEICESTER.

AT the meeting of the Leicester Board of Guardians on 26th August, 1884, the Clerk produced a statement on the administration of the Vaccination Acts. (Table C, page 414, Fourth Report, Royal Commission on Vaccination.) The "Vaccination Inquirer," of October, 1884, states the Clerk explained "that prior to 1873 no statistics were available. So far as 1873 and 1874 are concerned, the figures regarding the number gratuitously vaccinated were probably inaccurate, the fees paid to the medical officers being the only means he had of estimating the number, and those fees included re-vaccinations. For other years the return was correct.

"Mr. Biggs, referring to the arrears, amounting since October last to 1,138 cases, said that in view of this extraordinary state of affairs they should take what might be called an extraordinary step. On some occasions the Local Government Board had been applied to by Guardians to say what they should do with respect to vaccination prosecutions, and in 1875 there was a person in Evesham who refused to have his child vaccinated. On that occasion the Local Government Board condescended to forward a letter for the instruction of the Guardians. . . . He thought, therefore, it was time the

“Local Government Board should give some
“authoritative opinion as to what was right for
“the Leicester Board to do. He moved that the
“Board appoint a Committee to draw up a
“memorial for presentation to Sir Charles Dilke,
“showing the state of affairs as regards vaccina-
“tion in Leicester, and asking the advice of the
“Local Government Board thereon. Last year
“they had in Leicester no less than 996, and that
“evening they had submitted 1,138 arrears. He
“could not see why any member of the Board
“should refuse to vote for the resolution.

“Mr. Billings moved as an amendment that
“the Board direct the vaccination officer to
“institute and conduct proceedings, and enforce
“the full fine in all cases which are now or may
“be hereafter in default.

“Mr. Webb seconded the amendment.

“On division, Mr. Biggs’s motion was carried
“by a majority of one.”

The “Leicester Daily Mercury” of 30th August, commenting on this matter, said :—

“The statistics presented to the Guardians prove
“conclusively that the administration of the Vac-
“cination Acts in this town has absolutely broken
“down. It is indeed a remarkable fact that
“whereas in 1873 of 4,446 children born 3,730
“were successfully vaccinated, in 1883, when the
“number born was 4,819, only 1,732 came suc-
“cessfully through the operation. Moreover, in
“1874 only seven remained unvaccinated, whilst
“last year the number was no fewer than 1,906.
“It may be that under the pressure of the law

“some of these 1,906 may submit their children
“to the operation, but this does not materially
“affect the question, for it is safe to presume that
“all who have faith in vaccination act up to it
“without waiting for the authorities to jog their
“memories.

“ . . . It is significant that since the last
“small-pox epidemic in Leicester, at which period
“the town was well vaccinated, public confidence
“in the law has diminished, while the trust of
“the people in the policy of immediate isolation,
“so successfully pursued by the sanitary authori-
“ties, has correspondingly increased.”

In the “Leicester Daily Post” of 20th September, 1884, there appeared the following quotation from the “Lancet” :—

“The anti-vaccinationists in Leicester now
“awaiting summonses are said to number three
“thousand. In view of the magnitude of the
“necessary legal proceedings, application has
“been made by the local authorities to the Local
“Government Board for advice in the matter.
“In the meantime, small-pox has made its appear-
“ance, and it is singular to learn, yet after all
“natural, and, we may add, creditable to the
“common sense of the townspeople, that vaccina-
“tion has been resorted to in order to prevent it
“spreading. The precaution comes late, but it
“may be hoped not too late, to interfere with the
“experiment on a large scale to which so many
“inhabitants of the town have rashly devoted
“their children. The mildness of the present
“epidemic and its comparative limitation, results
“almost exclusively due to efficient vaccination in

“other parts of the country, have much to do with
“the immunity hitherto enjoyed by Leicester.
“ . . . We do not doubt that the Local Govern-
“ment Board will know how to uphold a sanitary
“measure as right as it is necessary, even while
“using such consideration as may be due towards
“offenders who are possibly misled rather than
“perverse. . . .”

The wishes of the Editor of the “Lancet” appear to be the authorities for his statements. They were thus disposed of in the “Leicester Daily Post” :—

“We quote the above from the ‘Lancet’ in
“order that both sides in the vaccination con-
“troversy may be fairly heard ; but it is impossible
“not to observe the errors into which the medical
“journal has fallen. In the first place, small-pox
“is not epidemic in Leicester, and has not been
“for years. Neither are the mildness of the
“recent outbreak here alluded to, and its com-
“parative limitation, ‘results almost exclusively
“due to efficient vaccination in other parts of
“the country,’ for the infection was brought to
“Leicester from London, which enjoys the repu-
“tation of being well vaccinated. Moreover, if it
“be true that the pestilence strikes unvaccinated
“persons, how is it that the unvaccinated in
“Leicester have escaped, while the persons who
“have suffered were both vaccinated ? Were they
“‘practically unvaccinated,’ though vaccinated ?
“Further, vaccination has not been resorted to in
“order to prevent the spread of the contagion—at
“any rate, so far as we are aware. On the con-
“trary, the authorities have with commendable

“energy isolated the cases as they have occurred,
 “and removed all who have been brought into
 “close contact with the patients into quarantine
 “at the Fever Hospital, which methods have
 “proved successful in this instance, as they have
 “in previous times. We do not say whether vac-
 “cination is a good thing or not. We simply
 “point out the mistakes into which our con-
 “temporary has fallen.”

A writer in the “Midland Free Press,” of 20th September, said :—

“I am happy to think that the believers in
 “vaccination—those who consider themselves ‘pro-
 “tected’ from small-pox by having undergone the
 “operation, but who for all that are among the
 “first to take alarm if small-pox makes its appear-
 “ance—may now breathe freely. More than a
 “fortnight has elapsed since the second case
 “occurred in Leicester, and no other has been
 “reported. The disease was introduced by a
 “young man who had paid a visit of a few days
 “to London; a boy in the same house sickened,
 “and, although he had been vaccinated, he has
 “suffered most severely, his life for several days
 “being despaired of. Still both are now rapidly
 “recovering, and the disease has again been
 “stamped out. Thus all the evil prognostications
 “indulged in by writers at a distance, as to the
 “awful way in which small-pox would rage if
 “it once appeared in ‘unvaccinated Leicester,’
 “have proved unwarrantable.”

Meanwhile, the following memorial was drafted and submitted on 21st October, 1884, in accordance with the resolution :—

“The Guardians of the Leicester Union desire
“to lay before your honourable Board the extra-
“ordinary circumstances which have arisen in
“regard to the Vaccination Acts in Leicester.

“The paragraph contained in your letter of 4th
“September, 1883, relating to the Guardians’ duties
“under Art. 16 of the Local Government Board’s
“Order of 31st October, 1874, intimated that pro-
“ceedings were to be taken so as to enforce
“conviction in each case of default under the
“Vaccination Acts.

“On 5th October, 1883, the Guardians, by the
“casting vote of the chairman only, authorised
“their vaccination officer to take proceedings
“against 996 persons who were at that time
“defaulters under the Acts. The result of these
“prosecutions was to send 21 parents to prison,
“the sale of household goods distrained from 86
“homes, amidst great disturbance and riot, neces-
“sitating the presence of a large police force,
“under the chief constable, for the maintenance
“of the public peace, whilst nearly the whole
“of the remainder paid the penalties imposed by
“the magistrates, only 82 out of the total 996
“reluctantly allowing their children to be vac-
“cinated under pressure of the law.

“The Guardians submit that the primary object
“of the law being the vaccination of children and
“not the prosecution of parents, that object is not
“attained by the proceedings which they have
“taken by your instructions.

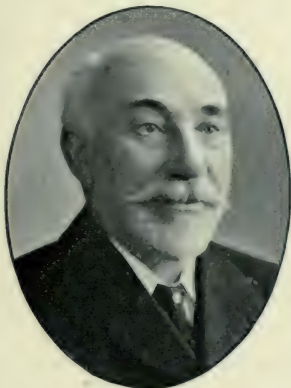
“On the other hand, these numerous prosecu-
“tions tend to bring the administration of the



Councillor J. NORTH. J.P.
(Guardian)



Alderman Sir THOMAS WRIGHT, J.P.



Councillor J. BUTCHER.



Councillor E. JENNINGS.



Mr. O. B. STANION (Guardian)



Mr. F. W. KEMP



Councillor AMOS BOOTH
(Guardian).



Mr. W. P. ELLMORE
(Guardian).



Mr. H. B. HALSE.



Mr. J. T. STEPHEN.



Mr. E. LESTER. (Guardian).



Mr. JOHN POTTER
(Member of School Board).

“law into contempt, and by inflicting great hardship they have in many instances excited the sympathy and indignation of the public.

“Some of the Leicester magistrates reluctantly impose penalties and express sympathy with the defaulters.

“The opinion largely prevails in medical and other circles that a less rigorous administration of the law would result in an increased number of vaccinations.

“The Guardians object to be the instruments of carrying out a law which they believe is opposed to the spirit of the age, and they trust that they may be relieved from such duty, pending the probable repeal of the vaccination statutes.

“There is no small-pox in Leicester, and the few isolated cases during the past eleven years have been imported from so-called protected districts.

“The following is an extract from the annual report of the Medical Officer for Health for the borough for 1883 :—

“ ‘ Since 1873 up to the present time, an interval of eleven years, the town has enjoyed an almost complete immunity from the inroads of the disease (small-pox). In the last seven years there have been no fewer than seventeen importations of small-pox into the town. Notwithstanding this large number of importations, the disease has always been stamped out, and the town thus saved from the distress and

“ ‘mortality which have hitherto accompanied its
“ ‘prevalence.’

“ The Guardians wish to point out that the
“ distress and mortality here referred to were
“ prior to 1873, when vaccination was in full
“ practice, while the means since resorted to with
“ such uniform success have been isolation of
“ patients, disinfection of their homes, with the
“ adoption of general sanitary precautions, and in
“ no case vaccination.

“ They also wish to state that this success has
“ been attained in the midst of an increasingly
“ unvaccinated population.

“ The enclosed return shows that the opposition
“ now embraces more than half the population,
“ only 1,732 being vaccinated out of 4,819 births
“ for the year 1883.

“ When questions put upon the Vaccination
“ Acts have been submitted to your honourable
“ Board, it has been the invariable custom to
“ refer inquirers to the letter addressed to the
“ Evesham Board of Guardians in 1875. The
“ Leicester Guardians feel that that letter is
“ altogether inadequate to their present inquiry,
“ as it relates to one individual, whilst in Leicester
“ the prosecutions already carried out since 1873,
“ according to the enclosed return, amount to
“ 2,679, and the same return gives 1,906 defaulters
“ for 1883, in addition to the number accumulating
“ this year, making a probable total of 3,000 in
“ all to be dealt with.

“ Under the circumstances enumerated, the
“ Board are of opinion that the intention of the

“framers of the Acts, as well as the requirements
“of justice and the public health, would be fully
“carried out if they instruct their vaccination
“officer not to proceed beyond the delivery of
“Notice A, and they respectfully ask that the
“instructions given them may be modified to that
“extent.

“The memorial was adopted unanimously.”

On this, the “Midland Free Press,” of 25th October, observed :—

“We congratulate the Board on the judgment
“at which they have at length arrived. The case
“as they put it is clear and unmistakable, and
“we might say unanswerable. But what steps
“are the Local Government Board likely to take
“in the matter? The plain statement of facts
“contained in the memorial goes to prove the
“practical immunity of Leicester from small-pox,
“so long as the disease is not imported from
“London, Birmingham, and other well-vaccinated
“centres. In addition, we have the startling
“assertion that the opposition to vaccination now
“embraces a very large portion of the child popu-
“lation of Leicester, only 1,732 children having
“been vaccinated out of 4,819 born last year!
“The vaccination officer has repeatedly confessed
“his inability to overtake the arrears of work,
“to say nothing of the large number of fresh
“cases constantly added to the list, and as further
“prosecutions have been suspended for several
“weeks, pending the decision of the Local Govern-
“ment Board, it will be virtually impossible to
“bring up all the defaulters should such a course
“be ordered. We trust that this memorial will

“receive the serious consideration of the President
“of the Local Government Board, and that in this
“matter Sir Charles Dilke will act upon the
“dictates of common sense, and not at the behest
“of a few medical advisers of the Board. Let him
“direct an official inquiry to be made into the
“facts of the case as set forth by the Leicester
“Guardians, if he will ; better still, let him come
“and see for himself what course is adopted in
“Leicester to stamp out small-pox—steps that have
“succeeded to an extent which has at one and
“the same time astonished and disappointed our
“local medical men. The subject is one of
“world-wide importance ; what has been done in
“Leicester may possibly be done in other towns—
“we see no reason to the contrary ; and, therefore,
“we would again urge that before an order is
“given—certainly before an order is sent here to
“recommence a useless system of persecution—a
“Government inquiry should be held, and a full
“report be made to the Local Government Board
“on the subject.”

It need scarcely be added that the Local Government Board took little or no notice of the memorial.

CHAPTER XXIV.

LEICESTER MARTYRS.

It was but fitting that, whenever a Government inquiry respecting vaccination was held, the evidence of a town such as Leicester should be taken. Over 6,000 summonses had been issued against parents, who were brought before the Magistrates; and there had been 64 commitments to prison, including three mothers, all of whom were put in gaol; nearly 200 homes having been sold up under distress warrants, and between £2,000 and £3,000 being paid in fines and costs. It was inevitable that such evidence should occupy considerable time, and become an important factor in the entire case. Some of these imprisonments were for relatively long periods (one for no less than thirty days—ten days for each of three children). Many parents suffered great hardships; for, in addition to the fines imposed, the loss of time meant proportionate loss of wages, causing serious discomfort and unhappiness in many homes. One of the men, it is said, being of weakly constitution, had his death accelerated, if not actually caused, by his imprisonment. However this may be, it is certain that all those prosecuted were of the most reputable, law-abiding classes.

To succeeding generations it will appear almost as a thing incredible that, in one town, in the very centre of England, towards the close of the nineteenth century—the century of boasted freedom, of enlightenment, of the highest attainments of science, and of civil and religious liberty—more than 6,000 honest, law-abiding citizens should have been hauled before the Magistrates, mulcted in fines, distrains, or imprisonments, and otherwise ignominiously treated: for what? Simply for protecting their helpless offspring from blood poisoning; from hideous contamination; from what Dr. Creighton says is a “grotesque superstition”; from disease and possibly death. One might well ask—Can it really be true that all this persecution happened? Alas! the facts contained in the Summary of Proceedings and List of Imprisonments which follow tell their own sorrowful tale of hardship and suffering. For the sake of my native town, for the sake of our law-makers, I would that these hideous traces of nineteenth century barbarity could be blotted out of the page of history and remembrance for ever!

The proceedings taken under the Vaccination Acts in the Borough of Leicester, from 1868 to 1889, show the extent of the hardships endured by the people of Leicester to secure parental liberty.

SUMMARY.

Number proceeded against	-	-	-	-	-	-	6,037
Number dismissed	-	-	-	-	-	-	997
Orders made (with Costs)	-	-	-	-	-	-	984
Orders made (without Costs)	-	-	-	-	-	-	131
Orders made (total)	-	-	-	-	-	-	1,115
Number fined	-	-	-	-	-	-	3,651

SUMMARY.—Continued.

Number to pay Costs as well as Fine	-	-	-	274
Amount of Costs where Orders were made	-	£197	2s.	0d.
Amount of Fines	-	-	-	£1,922 9s. 0d.
Amount of Costs in addition to Fines	-	£192	8s.	0d.
Number of Distress Warrants issued, 193,				
for Fines amounting to	-	-	-	£92 18s. 0d.
Amount recovered, with Costs	-	-	-	£76 4s. 0d.
Imprisonments or Commitments in default				
of payment	-	-	-	64
Total amount of Costs on Orders, Fines,				
Costs with Fines, and Proceeds of				
Distrain Sales	-	-	-	£2,388 3s. 0d.

* [See Table I, page 415, Fourth Report, Royal Commission on Vaccination.]

NAMES OF PERSONS IMPRISONED UNDER THE
VACCINATION ACTS IN THE BOROUGH OF
LEICESTER, FROM 1869 TO 1884.

Name.	Magisterial Decision.	Date of going to Gaol.
William Johnson	Fined 20s., or 14 days.	Jan. 15, 1869.
Joseph Smart	" " " " "	Mar. 15, 1869.
Isaac Sharpe	" " " " "	Sept. 13, 1869.
Henry Matts (on each of three summonses)	" " " 10 "	Feb. 24, 1871.
Sarah Annie Wrigley	" " " " "	June 16, 1871.
George Saddington	" " " " "	Aug. 21, 1871.
James Jephcot	" " " " "	Aug. 21, 1871.
George Frith	" " " 14 "	Feb. 9, 1872.
Frank Palmer	" " " 10 "	Feb. 26, 1872.
Joseph Wright	" " " 14 "	July 19, 1872.
Frank Palmer	" " " 10 "	Nov. 29, 1872.
Amos Booth	" " " " "	Oct. 25, 1875.
Isaac Goode	" " " " "	Jan. 17, 1876.
Charles Eagle	" " " " "	May 8, 1876.
Frank Palmer	" " " " "	May 8, 1876.
James Cartwright	" " " " "	May 19, 1876.
Elias Ed. Davie	" " " " "	July 28, 1876.

**NAMES OF PERSONS IMPRISONED UNDER VACCINATION
ACTS.—Continued.**

Name.	Magisterial Decision.	Date of going to Gaol.
John Thos. Payne (on each of two sum- monses)	Fined 10s., or 5 days.	Sept. 11, 1876.
James Pratt	" 20s., " 10 "	Sept. 11, 1876.
George Hatfield	" " " " "	Sept. 22, 1876.
James West	" " " " "	Sept. 22, 1876.
Leonard Hamer	" 10s., " 7 "	Mar. 28, 1877.
George Weston	" " " " "	Sept. 21, 1877.
George Gee	" " " " "	Nov. 30, 1877.
William Mackness	" " " " "	Dec. 14, 1877.
Arthur Wileman	" " " " "	Jan. 4, 1878.
John Thos. Payne	" " " " "	July 19, 1878.
Edward Smith	" " " " "	May 26, 1879.
William Derry	" " " " "	July 25, 1879.
William Pratt	" " " " "	Aug. 8, 1879.
Humphrey Burton	" " " " "	Oct. 20, 1882.
William Hy. Rodwell	" " " " "	May 14, 1883.
George Allcroft	" " " " "	Oct. 19, 1882.
Jim Ashby	" " " " "	Nov. 9, 1882.
Samuel Dilley	" " " " "	Nov. 29, 1882.
Charles Hart	" " " " "	Nov. 29, 1882.
Henry Kendrick	" " " " "	Nov. 29, 1882.
William North	" " " " "	Dec. 11, 1883.
John East	" " " " "	Dec. 11, 1883.
Reuben Soars	" " " " "	April 13, 1883.
Joseph Whitehead	" " " 10 "	Nov. 22, 1883.
William Ball	" " " 7 "	Nov. 23, 1883.
Samuel Jas. Elliot	" " " " "	April 10, 1884.
Frederick Roseblade	" " " 10 "	Dec. 13, 1883.
J. L. Williams	" " " 7 "	Feb. 2, 1884.
William Green	" " " " "	Jan. 21, 1884.
A. J. Cater	" " " " "	Jan. 21, 1884.
John Holt	" " " " "	Jan. 18, 1884.
Richard Brunt	" " " 10 "	Jan. 21, 1884.
John Deeming	Costs on Order	Feb. 29, 1884.
Henry Curvell	Fined 10s., or 7 days.	Aug. 11, 1884.
Ann Tomkins	" " " 10 "	June 9, 1884.
John Deeming	" " " 7 "	June 9, 1884.

NAMES OF PERSONS IMPRISONED UNDER VACCINATION
ACTS.—Continued.

Name.	Magisterial Decision.	Date of going to Gaol.
John Burdett	Fined 10s., or 7 days.	Aug. 11, 1884.
Charles A. Hart	" " " " "	Aug. 11, 1884.
William Mayer	" " " " "	June 9, 1884.
George Stephenson	" " " " "	June 9, 1884.
William B. S. Jones	" " " " "	June 2, 1884.
William Mackness	" " " " "	June 2, 1884.
Edwin Walker	" " " " "	June 2, 1884.
John Tom Wakom	" " " " "	Aug. 11, 1884.

In addition to their fines, some of the above-named defendants were also ordered to pay the costs.

It will be noticed that three of the number were mothers. All honour to the parents, both men and women, who, rather than submit the health of their children to the risk of the blood poisoners' lancet, preferred the prison cell. William Johnson, whose name heads the list, was the first in the Kingdom to be imprisoned under the Vaccination Acts. Also, Henry Matts, the fourth name on the list, suffered the longest term of imprisonment under the old barbarous penal regime—namely, thirty days, being ten days for each of three children. These honours, therefore, belong to Leicester.

Thus was the small flame of resistance fanned by these harsh proceedings into a huge conflagration, which culminated in a demonstration, in 1885, when copies of the Vaccination Acts were defiantly burned in public on that never-to-be forgotten occasion! The people of Leicester were thoroughly aroused. They organised what was

described as the largest and most impressive demonstration that has ever been witnessed within its boundaries. It took the form of a national outburst against the cruelties attendant upon the enforcement of compulsory vaccination. Factories and warehouses were closed, and the townspeople gave themselves up to a general holiday, in order to participate in, and show their sympathy with, the project on hand.

CHAPTER XXV.

THE GREAT LEICESTER DEMONSTRATION.

CONSIDERABLE newspaper correspondence preceded the Demonstration, and, amongst other letters, the following was published in the "Daily News," of Monday, 23rd March, 1885 :—

VACCINATION.

[To the Editor of the "Daily News."]

Sir,—As you have published several articles reporting the progress of the revolt against compulsory vaccination at Leicester, where the prosecutions of the 5,000 Nonconformists ordered with a light heart by the Local Government Board are now being carried out, I venture to inform you that arrangements are nearly complete for holding, on the 23rd inst., a monster public demonstration as the most fitting mode of declaring unyielding opposition to this intolerable injustice. Already about forty anti-vaccination leagues, and more than fifty towns where the opposition, though widespread, is as yet unorganised, have signified their intention of taking part in the proceedings, and both Ireland and Scotland are to be represented. The large number of letters of sympathy which are every day pouring in from our deeply-injured and much-harassed countrymen, as well as from the Continent and the United States, show that the revolt is much wider than our opponents are willing to allow. Amongst the writers are professors of universities, members of legislative assemblies, jurists, doctors of medicine, statisticians, and eminent publicists, who have made this subject the special object of their investigation, and who, so far from seeing a benefit in Jenner's prescription, find

in it only failure, disease, death, and the instrument of an unspeakable tyranny. A distinguishing feature in the communications which have reached our committee is the number of those who certify to have had healthy children injured or killed by what is said to be the benign operation of vaccination. That our fellow-countrymen will assist us in the righteous struggle in which we are engaged is no longer a matter of doubt, and if we can obtain impartial treatment on the part of the press—hitherto too unfairly denied us—we are certain of an early and peaceable victory. I beg to enclose programme. On behalf of the Leicester Demonstration Committee,

J. T. BIGGS,

Member of the Leicester Board of Guardians.

A full account of the Demonstration will be found in "The Vaccination Inquirer," for April, 1885, and from this the following extracts are taken :—

"As soon as the Demonstration was projected, offers of assistance were received from all parts of the United Kingdom, the London Society and the National Anti-Vaccination League cordially co-operating. An attractive programme was prepared, the railway companies were approached on the subject of travelling facilities, a procession was arranged for, and Leicester decided on making holiday on the occasion. Soon it was seen that nothing was wanting save fine weather to make the Demonstration a complete success, and Monday, 23rd March, 1885, memorable in the annals of the town.

"PREPARATIONS.

"The headquarters of the Demonstration were at the Temperance Hall, and long before mid-

"day it was a scene of intense activity, most of
 "the banners and flags being fitted up there. Of
 "these there were some 700 large and small!
 "Many were tastefully designed, and the colours
 "were as various as the inscriptions. North-
 "ampton bore witness that 'Compulsory vaccina-
 "tion is a usurpation of unjust power,' and
 "Brighton that 'Truth conquers.' Kent, with its
 "rampant horse and legend *Invicta*, set 'Parental
 "affection before despotic law,' and demanded
 "'The repeal of the Vaccination Acts, the curse
 "of our nation,' clenched with the adjuration,
 "'Men of Kent, defend your liberty of conscience;
 "better a felon's cell than a poisoned babe.'
 "Kettering pronounced for 'Freedom,' and Halifax
 "that 'Jenner's patent has run out.' Middleton
 "set on high 'The crusade against legalised com-
 "pulsory medical quackery'; whilst Oldham called
 "for 'Health and liberty,' and exhorted beholders
 "to 'Be just and fear not,' assuring them, truly
 "enough, 'The price of liberty is eternal vigilance.'
 "Finsbury and Banbury united in the advice,
 "'Stand up for liberty!' Southwark called for
 "'Entire repeal and no compromise,' and Barnolds-
 "wick for 'Sanitation, not vaccination.' Truro
 "pertinently asked, 'Who can bring a clean thing
 "out of an unclean?' Keighley, ever to the fore,
 "said, 'We fight for our homes and freedom.'
 "Earlstown asked for 'Pure blood and no adul-
 "teration,' and Lincoln averred, 'We protect our
 "offspring.' Eastbourne advised, 'Cease to do
 "evil, learn to do well.' St. Pancras sent 'Cordial
 "greeting and sympathy to the heroic martyrs of
 "Leicester.' There was a well-appointed hearse,

"with a child's coffin inscribed, 'Another victim
 "of vaccination,' and the observation of Sir Joseph
 "Pease in the House of Commons, 'The President
 "of the Local Government Board cannot deny that
 "children die under the operation of the Vaccina-
 "tion Acts in a wholesale way.' A banner bore
 "the prayer, 'From horse-grease, calf-lymph, cow-
 "pox, and the Local Government Board, good
 "Lord deliver us.' Another had 'A dead swindle
 "—a vaccination death certificate.' The origin of
 "cow-pox in horse-grease was illustrated by a
 "mangey horse with bandaged heels and a heifer
 "on a dray. The varieties of virus, indifferently
 "and ignorantly used for vaccination, were repre-
 "sented in six labelled jars, the original Jennerian
 "grease being inscribed, 'Tis grease, but living
 "grease no more.' Mr. Golding, of Leytonstone,
 "marched with a model of Holloway Prison,
 "wherein he had recently suffered incarceration
 "for saving his child from vaccination. There
 "were numerous banners with piquant local
 "allusions, which would require more or less
 "interpretation outside Leicester. A fine banner
 "from Belgium bore the inscription in French,
 "'Neither penalties nor prison can prevent vaccine
 "from being a poison and the vaccination laws
 "an infamy.—Dr. Hubert Boëns.' On the other
 "side was a babe in a cradle and a doctor with
 "an ass's head vaccinating it."

The weather was propitious—a finer spring day could not have been conceded to order.

One of the friends present sent to the "Inquirer" this account of

“ THE PROCESSION.

“ From several descriptions kindly sent us, we select the following :—

“ Leicester, Monday, 23rd of March, 1885, will be a golden day on the page of memory—a birthday of liberty. It should be known as the Children’s Day.

“ After weeks of bitter wind, a beautiful day of sunshine and calm. After years of grim fighting for freedom, a festival of mustering thousands, come together for mutual encouragement from battles past and for battles yet to come.

“ From half the counties of England, from scores of towns and cities, men of all professions, of all trades, bound in close bonds of sympathy, not by tens and twenties, but by hundreds and thousands met. Thank God for such proof that England has a conscience still, and a manhood and womanhood too that cannot and will not be trampled in the dust by the hoof of tyranny.

“ Flags everywhere ; music everywhere ; rosy faces everywhere ; happy laughter everywhere—a perfect carnival of common merriment and common sense, all converging toward the great market-place of the fine old stalwart town which is earning the gratitude of the age and the admiration of posterity once again.

“ Presently from that fine market-square streams out a vast procession. And what a procession ! A procession of thousands on thousands of ‘ Law-breakers,’ without a single policeman in the ranks to keep order ; and at the end of the day

“not even the rumour of a child knocked down
“or a pocket-handkerchief lost!

“What a procession! we say again. Not a
“procession of shams, like a Lord Mayor’s Show.
“No pasteboard imitations of Middle-Age heroes,
“but true warriors of a real and living chivalry;
“and, better still, with radiant wives; and,
“better still, their blooming children—wives who
“have said ‘Good-bye’ with streaming eyes when
• “barred doors closed between them—perhaps
“more than once, or twice, or thrice; and little
“children, who have knelt down to ‘Pray God
“bless dear papa,’ and then burst out into childish
“sobs for the dear, absent father—sleeping on
“‘Cross’s plank-bed’ in his stony prison cell.

“But all that is forgotten to-day, except that
“here and there in the great procession a motto
“on a banner, or a model of a prison-room, with
“its oakum and other attractions, may be seen.

“We meant to count the flags and banners,
“expecting to finish the task in an hour or so,
“but the numbers got mixed after two or three
“hundreds, and we gave up the task.

“We formed another good resolution—that we
“would write down all the mottoes—but once
“again we broke down utterly. Here are some
“samples, however:—‘Those that are whole need
“not a physician,’ ‘Keep your children’s blood
“still pure,’ ‘What you sow you shall also reap,’
“‘Who would be free themselves must strike the
“blow,’ ‘Stand up for liberty,’ ‘Dare to be a
“Daniel,’ ‘Liberty is our birthright, and liberty
“we demand,’ ‘Oppressive laws make discon-

"tented peoples,' 'Rachels are weeping for their
 "children all over the land,' 'The mothers of
 "England demand repeal,' etc. Then there were
 "the artistic banners, which would require the
 "assistance of art to bring them before the eye.
 "One of the first was a group well known to
 "thousands of our readers, representing a skeleton
 "vaccinating an infant in its mother's lap, while
 "a policeman grips her uplifted hand—the
 "mother's face being full of agony and the babe's
 "face of infantine unconsciousness—while the
 "skeleton and the officer of the law are grinning
 "with horrid expressiveness—a life-size enlarge-
 "ment of a design by Mrs. Hume. Another fine
 "banner was the medical bubbles which have
 "burst one after the other in the past century or
 "two. An immense Irish harp, in gold on a
 "green banner, was conspicuous; so were scores
 "we cannot describe; and so were other scores
 "which bore the names and sometimes the arms
 "of towns and cities throughout the country.

"Perhaps not the least part of the amusement
 "was created by the trollies and carts containing
 "tangible things, like diseased cows and horses,
 "showing that a supply of 'lymph' might still be
 "had without dealing with the foreigner—a great
 "comfort to the faculty, this piece of news, no
 "doubt, in case of a possible blockade in these
 "days of rumours of war. Of course, there was an
 "opposition doctor, who sniffed both at horse and
 "heifer, and proudly bestriding his own donkey,
 "offered 'Pure moke lymph' at the figure of 'a
 "guinea a dose.'

"Other trollies contained 'furniture seized for

"blood-money,' showing that the State had effected
 "a compromise, and that somebody was sleeping
 "without a bedstead, and sitting down to dinner
 "(if he had one) without tables and chairs,
 "instead of baby being vaccinated. One trolly
 "appeared to have negotiated the loan of a
 "gallows and scaffold from the county gaol for
 "Dr. Jenner's sole and particular use; and the
 "execution was carried on without the slightest
 "hitch, about every twenty yards through some
 "miles of streets, amid strong manifestations of
 "popular approval. To recur a moment to the
 "banners, we should mention a fine one from
 "the Scottish National Society, with the thistle
 "and lion, and the motto, 'Nemo me impune
 "laccessit.' Another good banner bore the words,
 "'Revolt against Bad Laws is a Christian Virtue
 "and a National Duty.' Another on a large scale
 "was inscribed, 'Vaccination tyranny defeated in
 "Jersey four times—1874, 1881, 1884, 1885'; and
 "another too truly declared, 'It is not small-pox
 "you are stamping out, but human creatures'
 "lives.

"Doctors riding cows and holding on by the
 "tail, and mothers at upper windows clasping
 "their infants, while policemen were trying to
 "commit a legal burglary at the keyhole in the
 "street below, were also conspicuously enjoyed.

"Then there were waggons and carriages of
 "various kinds, loaded with parents who were
 "fighting or had fought the battle of pure blood
 "against experimental butchery upon their
 "defenceless little ones; and crowding great
 "vans with their bright, happy faces, or riding

"on ponies, or carried in arms, came large
 "deputations of the five or ten thousand 'infantile
 "law-breakers,' to whose honour the day was
 "devoted, looking so fresh, and wholesome, and
 "free from blemish, that many and many a warm
 "heart must have cursed the horrid tyranny
 "which threatened them with a peril worse than
 "an enemy's siege of Leicester. Well might they
 "hold up banners with 'We will never sur-
 "render!' over their darlings' heads.

"Well might the drummers nearly beat in the
 "heads of their drums as the bands filed by—one
 "after the other at necessary intervals—playing
 "'The March of the Men of Harlech,' or Bruce's
 "address to his army, 'Scots Wha Hae wi'
 "Wallace Bled,' and other fine inspiring tunes.

"So, with 'banners before them, banners
 "behind them, banners to right of them, banners
 "to left of them,' and banners above them—hung
 "out from topmost windows from side to side of
 "street after street as far as eye could reach in
 "every direction—so rode the enviable children
 "of Leicester, waving their own tiny bannerets
 "and cheering with delight—on a day they will
 "cherish the memory of when their rosy faces
 "are wrinkled with another three score years, and
 "their sunny locks are grey—and when 'the great
 "dragon' (whose discomfiture they saw on Mon-
 "day well painted on a banner of St. George) has
 "long been slain.

"We need not recite the names of the streets
 "and squares through which this wonderful pro-
 "cession passed. Suffice it to say that its many

“thousands, after some two hours sturdy marching, marched into the great market-place and “grouped themselves”—so far as a rather close “squeeze would allow of grouping—around the “platform erected for the occasion, beside which “Mr. William Tebb, of London (who had taken “a leading part in the mustering of delegates “from all corners of England, and in other “respects assisting in the triumphant success of “the day) was seated in a carriage with Mrs. “Tebb, Col. Earle, Mr. and Mrs. Gibbs, and other friends.”

MEETING IN THE MARKET-PLACE.

After proceeding round the town, the procession assembled in the market-place, and every street and avenue leading thereto was densely packed by seething multitudes of humanity, the number present being variously estimated at from 80,000 to 100,000 people. Even this huge figure would have been considerably increased, but, true to the prejudice which prevailed against anti-vaccinators at that time, the railway companies—although repeated applications were made to them—all refused to run special trains for the occasion. “The Vaccination Inquirer” proceeds:—

“On a platform in front of the Corn Exchange “sat the leading representatives of the movement. “Councillor Butcher, of Leicester, was called to “the chair, and, addressing the immense audience, “said he thought those who were opposed to the “Acts might be well satisfied with the Demon- “stration they had organised. He had seen a “good many demonstrations in Leicester, but

“ never one to surpass the present in numbers
 “ and intelligence. Many present had been
 “ sufferers under the Acts, and all they asked
 “ was that in the future they and their children
 “ might be let alone. They lived for something
 “ else in this world than to be experimented upon
 “ for the stamping out of a particular disease. A
 “ large and increasing portion of the public were
 “ of opinion that the best way to get rid of small-
 “ pox and similar diseases was to use plenty of
 “ water, eat good food, live in light and airy
 “ houses, and see that the Corporation kept the
 “ streets clean and the drains in order. If such
 “ details were attended to, there was no need to
 “ fear small-pox, or any of its kindred ; and if
 “ they were neglected, neither vaccination nor
 “ any other prescription by Act of Parliament
 “ could save them. (Cheers.)

“ Mr. William Young, secretary of the London
 “ Society, then moved—‘ That the principle of the
 “ Compulsory Vaccination Acts is subversive of
 “ that personal liberty which is the birthright of
 “ every free-born Briton ; that they are destructive
 “ of parental rights, tyrannical and unjust in
 “ operation, and ought therefore to be resisted by
 “ every constitutional means.’ This Mr. Joseph
 “ Brown, of Dewsbury, seconded, and the resolu-
 “ tion was carried with vociferous applause.

“ Mr. Ewing moved a resolution empowering
 “ the chairman to sign a petition for the repeal of
 “ the Compulsory Acts. Mr. Hope Hume, of
 “ Torquay, seconded the motion, which was
 “ carried by acclamation.

“ The vast audience, led by the united bands,

" then sang 'The Cause that is True,' written for
 " the occasion by Mr. Louis Breeze, jun. Mr.
 " J. T. Biggs produced a copy of the Vaccination
 " Acts, which was suspended from iron bars and
 " burned, and the ashes cast to the winds. Cheers
 " were then given for Messrs. P. A. Taylor, J. A.
 " Picton, A. McArthur, and Amos Booth. The
 " proceedings terminated with the singing of the
 " National Anthem. As the concourse broke up,
 " a few adventurous spirits seized the effigy of
 " Jenner, and tossed it about. Two constables
 " secured it, and threw it down the staircase under
 " the Exchange. Hardly had they turned their
 " backs when the dummy was again produced and
 " tossed afresh. A second time the constables
 " entered the crowd, and, having secured the
 " 'Doctor,' solemnly marched him off to the police
 " station, minus his head, which had disappeared,
 " and could not be found.

" At five o'clock several hundreds of the visitors
 " had tea in the Temperance Hall, which was
 " handsomely decorated for the occasion. Con-
 " gratulations were universal as to the success of
 " the Demonstration, and the admirable organisa-
 " tion whereby it had been effected; Mr. J. T.
 " Biggs, treasurer, and Mr. G. H. Ellingworth,
 " secretary, of the Leicester League, being espe-
 " cially commended by those who knew the labour,
 " forethought, and skill involved in so great an
 " undertaking.

" Mr. Israel Hart, the Mayor, and the Chief
 " Constable of Leicester watched the marshalling
 " of the various detachments prior to the starting
 " of the procession. At the close of the pro-

“ceedings, the Chief Constable expressed his
 “satisfaction with the orderly course of the day’s
 “proceedings, to which, it is needless to say, his
 “own sagacious arrangements had largely con-
 “tributed.

“EVENING MEETING.

“In the evening a public meeting was held in
 “the Temperance Hall, under the presidency of
 “the Rev. J. Page Hopps, who was supported on
 “the platform by Mr. Enoch Robinson, M.R.C.S.,
 “Dukinfield ; William Tebb ; Colonel Earle ; W. L.
 “Beurle ; Alfred Milnes, M.A. ; William Young ;
 “Jabez Hunns ; George S. Gibbs, Darlington ;
 “G. R. Skipworth, Caistor ; T. Cragoe, Truro ;
 “H. Brummitt, Lincoln ; Dr. Spencer T. Hall,
 “Blackpool ; G. W. Ibbotson, Dewsbury ; W. T.
 “Martin, Lewes ; H. Weston, Sheffield ; B. Thorpe,
 “Middleton ; E. Heywood, Manchester ; J. Sheard,
 “Nottingham ; Dr. E. J. Crow, Ripon ; Miss
 “Jessie Craigen, London ; Philip Luck, East-
 “bourne ; C. Pocock and C. J. Harris, Brighton ;
 “A. Feltrup, Derby ; G. Newman, Gloucester ;
 “C. J. Wilson, Boston ; Councillor Burgess, Nor-
 “wich ; B. T. Birch, King’s Lynn ; W. E. Snell,
 “Edinburgh ; Hope Hume, Torquay ; Mr. Jeffery,
 “of the Keighley Guardians (who went to York
 “Castle for one month) ; Alderman Windley ;
 “Councillors Deacon, Butcher, Lennard, and
 “J. Green ; Messrs. Deacon, Finn, F. Taylor,
 “W. Carr, W. Baum, J. Allen, J. T. Biggs,
 “J. Spurway, J. Leeson, J. Leavesley, B. Grimes,
 “W. Wells, and J. Boughton (members of the
 “Leicester Board of Guardians) ; Rev. J. Moden,
 “W. Stanyon, T. Wright, W. F. Bramley, Dr.

“Lakin, J. Ewing, A. Moulds, W. P. Ellmore,
 “Leicester, and many others.

“Proceedings commenced with singing ‘The
 “Cause that is True.’ The chairman was cordially
 “received, and having addressed the meeting,
 “Mr. W. Stanyon moved—‘That the Compulsory
 “Vaccination Acts, which make loving and con-
 “scientious parents criminals, subjecting them to
 “fines, loss of goods, and imprisonment, propagate
 “disease and inflict death, and under which five
 “thousand of our fellow-townsmen are now being
 “prosecuted, are a disgrace to the Statute Book,
 “and ought to be abolished forthwith.’

“The Rev. J. Moden seconded.

“In supporting the motion, Mr. Tebb re-
 “marked :—Schiller says only great questions
 “arouse the profound depths of humanity, and
 “I venture to say that the question which has
 “called us together this evening belongs to that
 “category. The Demonstration which we have
 “witnessed to-day could only have been aroused
 “by a deep conviction in the justice and righteous-
 “ness of our cause ; and, if I am not mistaken,
 “it will help forward the work of emancipation
 “wherever this odious and indefensible tyranny
 “exists, and will leave a broad mark in the
 “history of our time. . . . When our victory
 “is won, we may rest assured that we shall have
 “shaken the foundations of other tyrannies besides
 “vaccination ; for injustice and cruelty are linked
 “together in more ways than one, and in the
 “downfall of this superstition we shall feel that
 “we have become a freer, healthier, and happier
 “people.

“ Mr. Alfred Milnes, M.A., also supporting the
 “ motion, said :—I can assure you it gives me very
 “ great pleasure to come here and take part in
 “ this splendid meeting. Not merely because one
 “ seems to breathe a purer atmosphere in coming
 “ to this, the head-centre of revolt against what I
 “ look on as in every aspect a wicked and intoler-
 “ able law, but chiefly because here in Leicester a
 “ man gets rid at once of all the mass of sophistries
 “ with which this matter of compulsory vaccina-
 “ tion has been overlaid. Here, at last, one comes
 “ face to face with the question in its plain, broad
 “ issues. . . . We are not met here to-night to
 “ ask for any man’s toleration. For my own part,
 “ toleration is a word I detest; and I wish that
 “ some revised version would give us a reading,
 “ ‘Who art thou, to tolerate thy brother?’ We
 “ ask for no man’s toleration, and we plead for
 “ no man’s pity; we are met to-night to demand
 “ the birthright of free citizens—equality before
 “ the law. (Cheers.) . . . The glorious words,
 “ ‘Be just and fear not,’ will stick in our throats
 “ and die still-born upon our lips when, eye to
 “ eye with childhood’s innocence and childhood’s
 “ purity, we try to utter them again as in the
 “ days before we sold our conscience at the bidding
 “ of the law, and so fell lower than the brutes
 “ who love their young. . . . Men of Leicester,
 “ will you not stand faithful and determined
 “ between the cradles of your little children and
 “ the power of such men as Marson? (Loud shouts
 “ of ‘Yes,’ ‘We will.’) . . . The day is break-
 “ ing. Through good report and ill report will you
 “ not hold out a little while? (Loud cries of ‘We

“will.’) Thanks, I am answered, and in your answering tones I hear the doom of an unrighteous law. (Prolonged cheering.)

“Mr. Enoch Robinson, M.R.C.S., in supporting the motion, said it seemed to him an outrage on common sense that, after all the efforts made to raise the people out of ignorance and superstition, there should be an Act of Parliament to keep their minds down on one point to the level occupied 160 years ago. . . . When the law is repealed we shall witness a marvellous transformation, not only in the disuse of vaccination by the people, but in its repudiation by the intelligence of the medical profession ; for many know, as we do, that vaccination, as a defence against small-pox, is one of the grossest superstitions that ever afflicted the human mind. (Cheers.)

“The resolution was carried unanimously.

“Mr. Thomas Cragoe, Truro, moved—‘That this meeting expresses hearty approval of the action taken by those Leicester Guardians who have opposed the prosecution of parents under the Compulsory Vaccination Acts ; also of those Magistrates who interpret the law reasonably and humanely ; and hereby records the determination to support only those candidates at Parliamentary and other elections who pledge themselves to vote for the repeal of the Compulsory Vaccination Acts.’ (Applause.)

“I come from a remote corner of the Kingdom, where the great arteries of politics hardly reach, but there the popular feeling is decidedly adverse to the Vaccination Acts. . . . Bishop Temple,

“speaking at Derby a few weeks ago before the
 “Purity Society, observed :—‘If ever there was a
 “movement born of the people, fostered by the
 “people, and spread by the people, this temper-
 “ance movement was one.’ Speaking of purity,
 “it was a pity the Bishop did not raise his voice
 “against pollution by law—that pollution against
 “which Leicester has this day spoken in unmis-
 “takable fashion—

“With many sturdy clouts and whacks,
 Leicester at last will beat the quacks.”

“Mr. George S. Gibbs, of Darlington, in second-
 “ing the motion, observed :—Vaccination is taken
 “as established and unquestionable, and silence
 “is the rule for its defence. . . . If the sacred
 “mystery of vaccination be exposed, what may
 “not follow? We have broken that silence to-
 “day, and now is the time to take advantage of
 “open ears to show how flimsy is the base on
 “which this poisonous superstition exists.

“The motion was put and carried unanimously.
 “The proceedings closed with singing the hymn
 “written by Mrs. Clant for the occasion :—

“Brothers in heart united
 Raise we our voice to-day,
 Now let our vow be plighted
 To sweep this law away.”

“The hymn was sung to a fine organ accompani-
 “ment to the tune, ‘Wait till the clouds roll by.’

“CONFERENCE OF DELEGATES.

“On Tuesday morning a conference of delegates
 “was held in Waterloo Hall. Mr. F. D. Askey,

“of Highbate, was called to the chair. There
 “were from seventy to eighty delegates present.
 “A general discussion on the movement, in which
 “the chairman; Mr. Jeffery, Keighley; Coun-
 “cillor Burgess, Norwich; Mr. Snell, Edinburgh;
 “Messrs. G. Newman, Gloucester; Stapley, Gled-
 “hill, Kenworthy, G. B. Skipworth, Heywood,
 “Alfrey, Miss Craigen, and others took part, and
 “the appended resolution was passed unani-
 “mously :—

““That this representative meeting of delegates
 “from the Metropolis and from over fifty leagues
 “instituted for obtaining the repeal of the laws
 “which enforce the practice of vaccination under
 “penalties of fine and imprisonment, pledges
 “itself to use every legal and constitutional means
 “to attain the end for which these societies were
 “formed, and to persevere in this agitation until
 “that object has been achieved. We would
 “strongly urge upon Parliament and our several
 “representatives in the House of Commons the
 “total and immediate repeal of these unwise and
 “oppressive laws, futile for all good, and fertile
 “of much evil; which violate the rights of con-
 “science, and unwarrantably interfere with the
 “sacred rights, duties, and responsibilities of
 “parents in protecting the health of their own
 “children; and which weaken in the mind of the
 “community that loyalty to our institutions, and
 “that respect for the law of the land, which it
 “was once the special duty of the Legislature to
 “confirm and strengthen. We also hereby express
 “our sympathy with, and our determination to
 “support, those conscientious persons who are or

"may become the victims of these harsh and cruel
 "laws. We call upon all Boards of Guardians,
 "in the exercise of that discretion which the law
 "gives them, to abstain from prosecutions which
 "inflame popular passions, and create a wide and
 "ever-widening sympathy with those whose con-
 "science compels them either to evade the law or
 "openly to revolt against it. We appeal to our
 "fellow-countrymen and countrywomen every-
 "where to countenance and aid us in this righteous
 "struggle for the disestablishment and disendow-
 "ment of a practice which is not only no security
 "against small-pox, but which, as many of us
 "know by bitter experience, poisons the blood of
 "our children, and implants in their constitution
 "the fatal seeds of disease and death, and violates
 "that right of self-control over the person which
 "is one of the ancient rights of the English citizen.

"'We invite the press throughout the land to
 "give publicity to this resolution, and to open
 "their columns to the free and fair discussion of
 "this pressing and momentous question.'

"Great satisfaction was expressed on all sides
 "over the splendid success of the Demonstration,
 "and an earnest desire that it might be repeated
 "elsewhere. Dr. Spencer T. Hall, of Blackpool,
 "aged seventy-three and infirm, was overcome
 "with emotion when speaking of the events of
 "the preceding day. His tears, he said, were tears
 "of joy and gratitude in having lived to see the
 "vaccination question attain its present position.
 "He had been vaccinated at two years of age, and
 "very seriously injured; but at fourteen he had
 "a severe-attack of small-pox, which was followed

“by improved health. Far rather would he have small-pox than be vaccinated. He had paid fines for all his children. In his long and wide experience he had never seen such evil results from small-pox as he had seen from vaccination.

“Councillor Burgess proposed a vote of thanks to Mr. Biggs and other Leicester friends.

“Mr. Biggs, in response, said the thanks he coveted was imitation. Let them return to their respective towns and convert them to the condition of Leicester.”

Numerous letters and telegrams were received from all parts of the world, the senders including:—P. A. Taylor, Brighton; C. H. Hopwood, Q.C., M.P., London; J. Allanson Picton, M.P., London; The Hon. Auberon Herbert, Welwyn; H. D. Dudgeon, Quorn; J. J. Garth Wilkinson, M.D., London; Prof. Alex. Wilder, M.D., New Jersey, U.S.A.; J. Fonday, M.D., Philadelphia; H. Bergh, New York; Prof. J. Emery Corderre, Montreal; Dr. P. A. Siljestrom, M.P., Stockholm; Dr. C. Sandborg, Christiana; Dr. Scheuermann, Basle; Th. Bruckner, M.D., ex-President of the Anti-Vaccination Societies of Switzerland, Basle; Dr. Ch. Pigeon, Nievre; M. Eugene de Masquard, St. Cerain; Dr. E. Weber, Cologne; Herr Augustus Zoppritz, Stuttgart; T. L. Nichols, M.D., London; Prof. Mayor, Cambridge; Dr. A. Vogt, Professor of Hygiene, Berne; Prof. Kuyper, Rector of Free University, Amsterdam; Dr. Oidtman and Count Hompesch, Berlin, Member of Reichstag; Theodore Poppe, Artern, Saxony; Carl Griebel, Meran, Tyrol; Jos. Ed. Schmid, Annathal, Bohemia; Fr. Konig, Artern, Saxony; Dr. Bilfinger, Stutt-

gart; Gustavus Weidner, Cologne; F. Butterdrodt, Hildesheim; Gustavus Parthenay, Saxe-Coburg (in the name of the National Health Association).

Accounts of the proceedings in connection with the Demonstration were published all over the country, but I need only refer to two. In a leading article, extending to more than a column, in its issue of Tuesday, 24th March, 1885, the "Leicester Daily Post" said:—

"The most striking feature of yesterday's demonstration in Leicester was undoubtedly its numbers. It is necessarily difficult to form a thoroughly reliable estimate of the tens, or rather scores, of thousands who yesterday either crowded the market-place during the dinner hour, or attempted to gain admission without success. Nor is it by any means easy to compute the enormous number who thronged the square a couple of hours later during the meeting. However wide may be the guesses at truth on this subject, upon one thing all must be practically agreed. Yesterday's demonstration was certainly, in every respect, one of the largest ever witnessed in the Borough of Leicester. . . . The extraordinary display of yesterday afternoon must be regarded as by far the greatest and most representative demonstration against the Vaccination Acts ever witnessed in this country. . . . Nor can there be a doubt as to the meaning of both the procession and the gatherings. Whatever else they may or may not do, they supply one more proof that the opposition to compulsion is steadily, though silently, gathering force in Leicester—that the already

“formidable dead-weight of passive resistance
 “is gradually becoming overpowering. Many
 “causes have unquestionably combined to create
 “this revolt against the law. But the principal
 “are not far to seek. Probably the most powerful
 “of all is the growing local conviction that in
 “Leicester, at all events, vaccination is now the
 “greater (not the lesser) of two alternative evils.
 “. . . . Until the Local Government Board
 “devotes as much attention to improving the
 “hygienic conditions as it now does to the
 “unpopular protective of vaccination, it is impos-
 “sible that one of the most infectious and hideous
 “of the zymotic diseases can become extinct.”

The “Times” of the same date contained the following statement :—

“The widespread opposition to the enforcement
 “of the compulsory clauses of the Vaccination
 “Acts which exists in Leicester culminated yester-
 “day in a great demonstration, which was carried
 “out very successfully. The position which the
 “inhabitants of the town have assumed with
 “regard to this question is due to a variety of
 “causes. At the present moment there are over
 “5,000 persons being summoned for refusing to
 “comply with the law. The total number of the
 “summonses issued in the year 1884 only reached
 “seven, or a little over one summons in every
 “two months, while at the present moment forty-
 “five summonses are being heard and disposed of
 “every week. But even the disposal of forty-five
 “defendants every week is not sufficient to meet
 “the requirements of the case, and the defaulters
 “and the objectors increase faster than the cases

" can be dealt with. The last decade has witnessed
 " an extraordinary decrease in vaccination, but,
 " nevertheless, the town has enjoyed an almost
 " entire immunity from small-pox, there never
 " having been more than two or three cases in
 " the town at one time. A new method for which
 " great practical utility is claimed has been
 " enforced by the sanitary committee of the Cor-
 " poration for the stamping out of small-pox, and
 " the chairman of the Committee has gone so far
 " as to declare that small-pox is one of the least
 " troublesome diseases with which they have to
 " deal. The method of treatment, in a word, is
 " this:—As soon as small-pox breaks out, the
 " medical man and the householder are compelled
 " under penalty to at once report the outbreak to
 " the Corporation. The small-pox van is at once
 " ordered by telephone to proceed to the house in
 " question; the hospital authorities are also
 " instructed by telephone to make all arrange-
 " ments, and thus, within a few hours, the
 " sufferer is safely in the hospital. The family
 " and inmates of the house are placed in quaran-
 " tine in comfortable quarters, and the house
 " thoroughly disinfected. The result is that in
 " every instance the disease has been promptly
 " and completely stamped out at a paltry expense.
 " Under such a system the Corporation have
 " expressed their opinion that vaccination is un-
 " necessary, as they claim to deal with the disease
 " in a more direct and much more efficacious
 " manner. This, and a widespread belief that
 " death and disease have resulted from the opera-
 " tion of vaccination, may be said to be the

“ foundation upon which the existing opposition
“ to the Acts rests.”

The result of this Demonstration was momentous! At the next triennial election of Guardians, in 1886, the traitors were dismissed, an overwhelming majority of members being returned pledged to vote in opposition to compulsion.

The subject was very soon introduced to the newly-elected Board, and on 4th May, 1886, after a debate, the compulsionists were routed by twenty-seven votes to eight. And thus ended the tyranny initiated by the previous Board, but which, doubtless, in the end did more to defeat than to establish compliance with the law.

Since 1886 the Guardians chosen have been uniformly antagonistic to compulsory vaccination. On 30th April, 1889, the policy of non-compulsion was once more affirmed by thirty-one votes against three.

The Guardians sent up a number of petitions against compulsory vaccination, they carried on a lengthy correspondence, and pursued an unflagging struggle with the Local Government Board. There is no need to give details of these occurrences, as they are all forcibly summarised in the principal memorial, presented by the Guardians to the Royal Commission.

PART III.

PROPOSED PARLIAMENTARY INQUIRY.

CHAPTER XXVI.

MR. J. A. PICTON, M.P., AND THE GOVERNMENT.

AT various interviews with the late Mr. James Allanson Picton, then M.P. for Leicester, I pressed upon him the desirability of moving in the House of Commons for a Royal Commission. Others joined with me in the representations made, and eventually, having recognised the justice of the request, Mr. Picton consented to the proposal. On 5th April, 1889, he moved the following in Parliament:—"That a humble Address be presented to Her Majesty, praying her to appoint a Royal Commission to inquire into the working of the Vaccination Acts; also into the condition, as regards the prevalence of small-pox or otherwise of any towns or districts in which the Guardians have for two years or more failed to prosecute for refusal to vaccinate, and

likewise into the system of compulsory notification, isolation, and quarantine, as carried out in Leicester and elsewhere ; to take evidence as to the present state of scientific and medical opinion on the effects of vaccination ; to inquire into the nature and causes of popular objections to vaccination, where such exist ; and to report whether any change in the law, and, if so, what change, is, in their judgment, desirable."

Mr. Picton gave the House an exhaustive review of events which had occurred since the last inquiry, that of 1871, and referred to the severe epidemic of that year, notwithstanding the assurance of witnesses who appeared before that Committee, that the administration of vaccination was almost perfect throughout the land. He alluded to England, Scotland, and Ireland, and also to the rejection by the House of Lords of the clause to abolish repeated prosecutions ; and, further, he dealt with the Sheffield epidemic, and Dr. Creighton's article on "Vaccination" in the *Encyclopædia Britannica*.

The Member for Leicester proceeded :—"Dr. Lawson Tait was not an anti-vaccinist, but, in a paper read at Birmingham in 1882, he said that zymotic diseases were absolutely preventible by securing fresh air, pure water, and abundant light. Many towns had shown what might be done by sanitation to drive away the disease of small-pox. In Leicester for nearly seventeen years they had found that sanitation, compulsory notification of contagious diseases, quarantine, and disinfection were sufficient to guard the town against disease. In 1872 they had a great

“deal of vaccination in Leicester and a great
 “deal of small-pox; while in 1888-89 they had
 “scarcely any vaccination and absolutely no
 “small-pox. All his constituents asked was that
 “impartial and experienced men should go down
 “to Leicester and judge for themselves.

“In conclusion, Mr. Picton said that he had
 “shown that the Committee of 1871 had its most
 “important recommendation rejected in another
 “place; that the Committee of that date was not
 “alive to the startling proofs which were afforded
 “by the repeated failures of vaccination to protect
 “society as distinct from individuals; that popular
 “uneasiness was growing; and that to a large
 “extent it was justified by the facts and the
 “official statistics; that prosecutions were becom-
 “ing a scandal; that the Leicester experiment of
 “seventeen years, up to the present time successful,
 “showed that freedom from small-pox did not
 “depend upon vaccination; and that medical men
 “were not agreed upon the safety of the opera-
 “tion; and he therefore moved for an inquiry
 “by a body impartially constituted—perhaps legal
 “minds would be best able to weigh the evidence
 “—not with the object of registering any foregone
 “conclusion, but to collate and weigh all the
 “evidence bearing upon the question.

“Dr. Farquharson said that, although an uncom-
 “promising advocate for vaccination, he seconded
 “the motion for a Commission of Inquiry, which
 “might well be presided over by one of Her
 “Majesty’s judges. Inquiry would promote the
 “cause of truth, and he did hope it would reach
 “the stage of finality, and so get rid of agitation.

“Mr. Ritchie, President of the Local Government Board, said Mr. Picton had always taken an intelligent interest in the vaccination question, and if the arguments against vaccination were always as temperately put forward as those of the hon. member, he should have no reason to complain. But he knew it was not so, and that the mind of the country, and especially of the working classes, was excited by a mass of literature and an immense number of statements which contained false propositions, which perverted facts in the most barefaced manner, and drew a picture of the effects of vaccination, which, in his opinion, fully accounted for the fact that the vaccination laws were perhaps regarded in many quarters with a very considerable amount of dissatisfaction.”

After speaking upon the invaccination of syphilis, vindictive prosecutions, Hayward's case, and repeated penalties, Mr. Ritchie eulogised the report of Dr. Barry, on the Sheffield epidemic, by saying :—“A more able and exhaustive report was never laid before the House. He recited at length the summary of the report supplied by Dr. Buchanan, ending with the assertion that ‘the figures from Sheffield were of the most conclusive character, and that vaccination as a protection against small-pox was never more completely vindicated.’ The demand of the hon. member for Leicester was for an inquiry. To grant an inquiry would no doubt seem to imply to some extent that there was a doubt as to the efficacy of vaccination. As far as the authorities at the Local Government Board were concerned,

"no such doubt existed. Every inquiry had
 "demonstrated that vaccination was one of the
 "greatest blessings ever vouchsafed to mankind.
 "Still he could not shut his eyes to the fact that,
 "in consequence of the strenuous efforts of the
 "anti-vaccinators to distort and misrepresent facts,
 "and the undoubted impression they were making
 "on the public mind, it might perhaps be desir-
 "able to grant an inquiry. Certain questions
 "connected with the operation of vaccination
 "might be usefully inquired into by a body of
 "gentlemen who could not be suspected of being
 "tainted with the prejudices of the Local Govern-
 "ment Board. Other questions connected with the
 "supply of lymph, and the manner in which
 "public vaccination was conducted, would like-
 "wise be proper subjects of investigation. The
 "Government had, therefore, determined to appoint
 "a Royal Commission, which, among other things,
 "would carefully consider how far sanitary pre-
 "cautions might take the place of vaccination.
 "The Government could not accept the terms of
 "the resolution, but hoped that the terms of
 "reference to the Royal Commission would be
 "sufficiently comprehensive to satisfy the hon.
 "gentleman. The Commission would be composed
 "of men whose opinions would carry great weight
 "in all quarters. The Government had come to
 "this decision not because they had the slightest
 "doubt of the efficacy of vaccination, but because
 "the state of public opinion required that a
 "thorough investigation should be made into the
 "whole question. He trusted that the conclusion
 "at which the Government had arrived would be

“satisfactory, not only to the member for Leicester, but also to those who, not agreeing with that hon. member, still thought there was ground for inquiry.”

Sir Lyon Playfair followed with a characteristic speech. He said the inquiry of 1871 was thorough and impartial. He alluded to the “Leicester Method,” and compared Leicester with Leipzig. After touching upon vaccination in Germany and other countries, he remarked that he “had said enough to show that vaccination had a splendid influence over this cruel and mutilating disease. He contended that there was no justification for inquiry arising from any failure of vaccination, but he agreed it was better to have an inquiry because the truth would come out.”

Sir W. Guyer Hunter, Mr. Thomas Robinson, the Right Hon. James Stansfield, Sir J. Pease, Dr. Cameron, Mr. A. O'Connor, Mr. Cremer, Mr. F. Channing (now Lord Channing), and Mr. T. Fry took part in the debate.

“Dr. Cameron said there was one reason for granting an inquiry which had not been mentioned, and which amply justified the course adopted by the right hon. gentleman, and that was the enormous strides which science had made since the passing of the Vaccination Acts.”

The above digest of the proceedings in the House of Commons, on 5th April, 1889, is taken from the report which appeared in the “Times” of the following day.

Although all parties were satisfied that an inquiry should be held, the Government would not

accept the terms of the resolution. But that did not matter. It was evident from Mr. Ritchie's speech that the supposed favourable nature of Dr. Barry's report on the Sheffield epidemic had largely influenced the Local Government Board, and through them the Government. It is passing strange that this famous Sheffield Report has now been utterly discarded and cast aside. Like the mythical deaths of the Frenchmen and Germans in the Franco-German war—a story which had no foundation in fact—so the bolstered-up figures in this precious report have been found to be unreliable. As a prop to vaccination, it is veritably of an unsubstantial character, and, in fact, as I shall show later on, rotten to its very core. The speeches of pro-vaccinists during the debate under notice prove that they, too, were confident—as well as Mr. Ritchie and the Local Government Board—that vaccination was to be vindicated at last! It is only another example of how near to the edge of a precipice people may live, and yet remain oblivious of their danger. Whatever else may be said of the Royal Commission, its appointment undoubtedly sealed the fate of vaccination, although, like all superstitions, the practice may be a long time expiring, but pass away it assuredly will.

OPINIONS OF THE LEADING MEDICAL ORGANS.

Commenting on the decision of the Government, the "Lancet" said, in its issue of 13th April, 1889, *inter alia* :—"It is about as rational to investigate the merits and value of vaccination as a security against small-pox as it would be

“ to question the utility of lifeboats, or Davy-lamps,
 “ or fire brigades. A few accidents and drawbacks
 “ mar the glory of every discovery and device for
 “ the mitigation of human calamity, but the
 “ benefits remain, and make history a very much
 “ more cheerful and creditable thing than it would
 “ otherwise be. . . . The rarity of small-pox,
 “ the large protection so far of anti-vaccinationists
 “ and their families by the very operation which
 “ they disparage, make it easy for them to be
 “ misled and prejudiced against vaccination. . . .
 “ Those who cannot see the overpowering argu-
 “ ment in favour of vaccination in the common
 “ facts of everyday experience, in the diminished
 “ mortality from small-pox in the community
 “ generally since vaccination was established by
 “ law, . . . and who have no regard to the
 “ extreme slightness of any drawbacks to this
 “ amazing achievement, will not be readily con-
 “ vinced by a few more or less vivid illustrations
 “ or dogmatic conclusions of a new Royal Com-
 “ mission. . . . We must not heap Pelion on
 “ Ossa in the shape of argument against prejudice,
 “ but will conclude with the hope that the
 “ Government will be exceedingly careful in the
 “ selection of persons to constitute the Commis-
 “ sion. We entirely agree with Mr. Picton and
 “ Dr. Farquharson that there should be a legal
 “ and judicial element in the Commission—a judge
 “ for president—to secure that the evidence shall
 “ be real evidence; but with this qualification
 “ the Commission should be representative. By
 “ all means let the anti-vaccinationists be well
 “ represented; but at the same time they must

“not have all their own way. . . . We are in
 “many respects only now at the very threshold
 “of some of the most important questions of
 “human liberty in civilised communities.”

The “British Medical Journal,” of the same date, remarked :—“As far as vaccination itself is
 “concerned, the evidence which will be given
 “before the Commission can only result in estab-
 “lishing the practice on a firmer basis than
 “before. Since the issue of the Report of the
 “Select Committee in 1871, such a mass of
 “accurate and reliable statistics has accumulated,
 “both in this country and abroad, . . . that
 “the report, comprising, as it must do, all the
 “most recent data, and the opinions of many of
 “the most able authorities and experts, will, we
 “anticipate, form a most valuable work on the
 “subject. For these reasons, the decision of the
 “Government deserves to be commended. . . .
 “In conclusion, we may express the hope that as
 “an inquiry has been decided upon, the whole
 “question will be thoroughly threshed out and
 “definitely settled, so that an agitation which
 “greatly unsettles the mind of the people, and
 “leads them into severe danger, may receive a
 “quietus from the irresistible logic of ascertained
 “facts. We cordially agree with Sir Lyon Playfair
 “‘that if it were not for popular prejudices it
 “would not be necessary to have an inquiry,’ but,
 “under existing circumstances, we wholly approve
 “of the step taken.”

CHAPTER XXVII.

THE ROYAL COMMISSION ON VACCINATION—ITS APPOINTMENT, CONSTITUTION, AND REFERENCE.

THE appointment of the Royal Commission in 1889 was in reality forced upon the Government of the day by the stern necessities of the case. Popular feeling in some important centres was growing into a dangerous intensity, owing largely to numerous injuries and deaths which the upholders of vaccination were compelled to admit had been caused by the practice, and the still larger number of instances in which the parents and relatives of deceased or mutilated victims laid the blame at the door of vaccination. It was almost inevitable under these circumstances that a Commission should be appointed, for, despite a brutal law, very frequently savagely administered, resistance to and abstentions from allowing the operation to be performed were so common, that vaccination itself then bade fair to become, at no distant date, to all intents and purposes obsolete.

It was hoped—and, indeed, believed—that the Royal Commission would soon reinstate vaccination in public favour, but the opposite turned out to be the case. Had the evidence been so strongly in favour of vaccination as expected, who can

believe that the final Report of the Royal Commission would have been delayed until its deliberations had covered the long period of over seven years?

It has, of course, been commonly assumed that the Commission appointed by Queen Victoria was impartially constituted. But of its original fifteen members not one was recognised as an avowed anti-vaccinist, and only four of the members were surmised to be opposed to compulsion. Had strict impartiality been the intention of the Government, seven of the strongest representatives on each side would have been selected, under the presidency of a disinterested chairman. For a considerable time, in consequence of its strongly biassed composition, the anti-vaccinists hesitated as to whether they should, or should not, actually altogether ignore the Commission.

The following were the terms of reference to the Commission :—To inquire and report as to—

(1) The effect of vaccination in reducing the prevalence of, and mortality from, small-pox.

(2) What means, other than vaccination, can be used for diminishing the prevalence of small-pox; and how far such means could be relied on in place of vaccination.

(3) The objections made to vaccination on the ground of injurious effects alleged to result therefrom; and the nature and extent of any injurious effects which do, in fact, so result.

(4) Whether any, and, if so, what, means should be adopted for preventing or lessening the ill effects, if any, resulting from vaccination;

and whether, and, if so, by what means, vaccination with animal vaccine should be further facilitated as a part of public vaccination.

(5) Whether any alterations should be made in the arrangements and proceedings for securing the performance of vaccination, and, in particular, in the provisions of the Vaccination Acts with respect to prosecutions for non-compliance with the law.

CHAPTER XXVIII.

LEICESTER AND THE ROYAL COMMISSION.

THE appointment of the Royal Commission was successively brought to the notice of the three public authorities of Leicester—the Town Council, the Board of Guardians, and the School Board—each of which passed resolutions and appointed deputations to appear before the Royal Commission.

The Town Council led off, on 28th January, 1890, with the appended resolution:—"That in the opinion of this Council it is inexpedient and unjust to enforce vaccination under penalties upon those who regard it as unadvisable and dangerous."

At the next meeting, on 25th February, 1890, a further resolution was passed:—"That the Mayor, with members of the Council who, as past Mayors, have had experience of the working of the vaccination laws, be appointed a deputation to appear before the Royal Commission to present the resolution adopted by the Council at the last meeting in reference to compulsory vaccination; also that the names of Mr. Biggs, Alderman Windley, and the Town Clerk be added to the deputation."

The deputation appointed attended accordingly, and presented these resolutions on 4th February,

1891. (Fourth Report, Royal Commission, page 150.)

The Guardians followed suit, and on 4th February, 1890, unanimously adopted a comprehensive and dignified memorial, and passed a resolution appointing a deputation to present it to the Royal Commission. It was duly presented on 4th February, 1891, and, on account of its importance, is given in extenso in the next chapter.

The School Board completed the business by adopting a resolution on 3rd March, 1890, and appointing the chairman, James Ellis, Esq., M.P., to present it, which he did on 4th February, 1891. The School Board resolution read as follows:—“That in the opinion of this Board it is inexpedient and unjust to enforce vaccination under penalties upon those who regard it as unadvisable and dangerous, and that a copy of this resolution be forwarded to the Royal Commission.” (Fourth Report, Royal Commission, page 156.)

Brief as was the examination of the chairman of the School Board, it was sufficiently long to show the Commission the great and growing difficulty in obtaining locally sufficient pupil teachers, owing to the stringent regulations of the Education Department insisting on their vaccination.

After the examination of Mr. James Ellis was over, the Guardians' deputation was received.

CHAPTER XXIX.

THE LEICESTER GUARDIANS AND THE ROYAL COMMISSION.

ON 4th February, 1891, Messrs. Joseph Leeson, John Thomas Biggs, and Lionel Percy Chamberlain attended before the Royal Commission—Lord Herschell in the chair—and the following account of the proceedings is taken from the Fourth Report, pp. 162-5 :—

“ 13,290. Chairman : You, gentlemen, are respectively ex-chairman, a former member of, and clerk to the Leicester Board of Guardians ?

“ Mr. Leeson : Yes.

“ 13,291. You present to the Commission the resolutions adopted by the Board of Guardians ?—
“ Yes ; I have here an abstract of correspondence and resolutions of the Guardians of the Leicester Union relating to the administration of the Vaccination Acts for the period from 1868 to 1889, and it was the wish of the Guardians, if it pleased your Lordship and the Commission, that the clerk should read the introduction to the Commission.

“ Mr. Chamberlain : The first resolution I will read is as follows :—‘ On 4th February, 1890, at a meeting of the Guardians, Mr. Councillor Biggs attended, and having presented the extracts and papers prepared from the records and minute

“books of the Board, the Board unanimously
 “resolved that they should be presented to the
 “Royal Commission by a deputation.’

“The history of the subject in Leicester is as
 “follows :—

“The Guardians of the Leicester Union respect-
 “fully present to the Royal Commission on
 “Vaccination the records of their administration
 “of the Vaccination Acts in the Borough of
 “Leicester. In doing this they would observe
 “that it is no exaggeration to say that the name
 “of Leicester is more prominently associated with
 “the agitation against compulsory vaccination than
 “that of any other town in the United Kingdom,
 “or probably in the world. It would, however,
 “be an error to assume from this circumstance
 “that the enforcement or practice of vaccination
 “had to any great extent been omitted or neglected
 “until recent years. In no other town has the
 “Board of Guardians, as the vaccinating authority,
 “more fully responded to the successive requests
 “of the Poor Law Board, or subsequently yielded
 “a more implicit obedience to the expressed wishes
 “of the Local Government Board, in promoting
 “the encouragement or enforcement of the Vac-
 “cination Laws.

“It is true that Dr. Buck, the first Medical
 “Officer of Health, in his report on the sanitary
 “condition of the Borough in 1851, ascribes an
 “epidemic of small-pox which occurred in 1845
 “to the neglect of the Board of Guardians in
 “carrying out the first Vaccination Act which was
 “passed in 1840. After referring to the remark-
 “able and general agreement of ‘medical and

“scientific persons’ as to the power of the ‘happy discovery’ of vaccination by the ‘immortal Jenner’ to prevent small-pox, and the obstacles thrown in the way of the successful working of the Vaccination Acts, he writes at page 5 of the Health Report for 1851 thus :—

“‘When the Legislature declared that the blessing of this sanitary enactment should be made operative in every Union in the Kingdom, we find that in 1842, considerably more than two years after the passing of the Act, the Board of Guardians, after frequent deliberations, came to the conclusion that it was “inexpedient to carry out the provisions of the Vaccination Act in Leicester” ; and as a not unnatural consequence of thus dealing with the Vaccination Act, we find that in the year 1845 small-pox appeared as an epidemic in the town, and in six months proved fatal to no less than forty-one individuals.’”

[Here follow copies of letters which passed between the Poor Law Board and the Clerk to the Leicester Board of Guardians in the year 1845, showing the steps which had been taken by the Guardians for the administration of the Act of 1840, and the concluding remark of which, in a letter from the Secretary of the Poor Law Board, was :—“I am instructed by the Commissioners to thank you for your communication, and to express the satisfaction of the Commissioners with the steps taken by the Guardians.”]

"It was not until 1853 that an Act was passed making vaccination compulsory.

"This Act of 1853 was further amended by an Act in 1861 to facilitate prosecutions, but there are no records to show whether prosecutions actually commenced (in Leicester) until after the passing of the Act of 1867. This Act (1867), which is now cited as the 'principal Act,' not only amended but consolidated all the preceding Acts. Yet it failed to fully realise the expectations of its promoters. It was discovered that the appointment of vaccination officers was optional and not obligatory. To remedy this defect in the Act and more rigorously enforce vaccination, an amending Act was passed in 1871, the year of the Select Committee of the House of Commons on Vaccination.

"The transfer of the duties of the Poor Law Board to the Local Government Board necessitated a further Act of Parliament to explain the Act of 1871. Under this Act of 1871, which referred to the Poor Law Board as executive authority, it was possible for Boards of Guardians to evade their responsibility to the Local Government Board, which had succeeded to the authority of the Poor Law Board. Hence the Act of 1874, which established the authority of the Local Government Board in vaccinal matters over Boards of Guardians.

"Notwithstanding the permissive character of the Act of 1867, the Leicester Board of Guardians, with a ready complaisance, appointed Mr. Maskell as Vaccination Officer on 28th July, 1868. His appointment was renewed annually

“until 1872, when he was permanently appointed,
 “and such appointment confirmed by the Local
 “Government Board.

“The effect of this appointment in securing
 “infantile vaccination is apparent on comparing
 “Table A with Table B. These tables may be
 “further compared with Table C, which shows
 “the great decline of vaccination in recent years.
 “These important returns (Table C) were first
 “presented to the Board of Guardians in 1884, and
 “they have since been moved for and supplied in
 “each succeeding year until 1888, when the last
 “return was published.” (*The tables were handed*
in. See Appendix II., Table A, B, and C, pages
413-4.) There has been a subsequent return
 since this was issued, which is included in
 Table C.

“Following closely upon the appointment of
 “the Vaccination Officer in July, 1868, a spirit of
 “opposition to compulsion was manifested in the
 “town, and prosecutions commenced even at this
 “early date. This appears from the fact that at a
 “meeting of the Guardians on the 3rd November,
 “1868, on the application of Mr. Maskell, the
 “Vaccination Officer, the Board resolved that he
 “be empowered to take the necessary steps to
 “procure a compliance with the provisions of
 “the law.”

“On the 23rd November, John Garner, and
 “on the 4th and 8th December, 1868, George
 “Saddington, were summoned before the Magis-
 “trates. These two cases were dismissed, owing
 “to the uncertainty of the Magistrates as to the
 “meaning of the law. On the 15th January, 1869,

“ Selina Allsop was summoned, and her case was
 “ dismissed. But William Johnson was, on the
 “ same date, fined 20s. or fourteen days imprison-
 “ ment, and he went to prison. On 15th March,
 “ 1869, three others were summoned before the
 “ Magistrates. One case was dismissed, one paid
 “ a fine of 20s. which was imposed, and the other,
 “ Joseph Smart, went to prison for fourteen days.

“ Strong feelings of indignation were expressed
 “ in the town when these first prosecutions and
 “ imprisonments took place. It was these prosecu-
 “ tions that led to the formation of a League in
 “ Leicester in opposition to the compulsory law.

“ The conflict thus started proceeded with vary-
 “ ing degrees of intensity, until in 1881 and 1882
 “ the elections to the Board of Guardians began
 “ to turn on the question of compulsory vaccina-
 “ tion. During the years 1882-83 the question was
 “ very much agitated, and in 1883, at the election
 “ of the first triennial Board of Guardians, it
 “ became the most important question of the hour.
 “ Meanwhile the prosecutions had grown from
 “ two only in 1868 to 1,154 in 1881, and several
 “ opponents of compulsory vaccination had gained
 “ seats on the Board. On the 9th January, 1883,
 “ the Board had declined by fourteen votes against
 “ eight to authorise the Vaccination Officer to apply
 “ for distress warrants against seventeen defaulters.

“ After the election in April, 1883, the first
 “ occasion for testing the feeling of the newly-
 “ elected Board occurred in June, 1883, when, in
 “ consequence of the defeat of Mr. P. A. Taylor’s
 “ motion against compulsory vaccination in the
 “ House of Commons, one of the members of the

“ Board gave notice to renew the prosecutions
 “ which had remained in abeyance since the vote
 “ of 9th January, 1883.

“ The resolution to renew prosecutions was
 “ moved by Mr. A. Panter on the 10th July, 1883 ;
 “ but an amendment, moved by Mr. J. T. Biggs,
 “ was carried by eighteen votes against fourteen,
 “ being a majority of four against the renewal of
 “ prosecutions. On the 2nd October, 1883, another
 “ resolution authorising prosecutions was moved
 “ by Mr. G. K. Billings, and this resolution was
 “ carried, after an exciting debate, by the casting
 “ vote of the chairman, the number voting on each
 “ side being equal—that is, sixteen against sixteen.
 “ The fate of nearly a thousand defaulters was
 “ thus decided merely by a casting vote. This
 “ decision was soon challenged. On the 27th
 “ November of the same year, the question was
 “ again discussed, and the renewal of prosecutions
 “ once more affirmed by nineteen votes against
 “ seventeen, being a majority of two. Notwith-
 “ standing this decision, prosecutions were not
 “ immediately resumed. Owing to the nearness
 “ of the Christmas holidays and the stagnation of
 “ trade usual at this season, a tacit understanding
 “ was arrived at for the temporary suspension of
 “ proceedings.

“ During the existence of this Board, from
 “ 1883 to 1886, prosecutions from various causes
 “ remained in abeyance during a period of about
 “ half the duration of the Board's term of office.
 “ But during the other half of the period, no fewer
 “ than 2,274 proceedings were taken before the
 “ Magistrates. As may well be imagined, this

“enormous number of prosecutions, including 185
 “distrainments and 24 imprisonments, produced great
 “excitement in the town, and led to a large
 “number of meetings protesting against the
 “action of the Guardians. These protestations
 “culminated in a national demonstration at
 “Leicester against the compulsory Vaccination
 “Acts and the conduct of the Guardians, which
 “was held on the 23rd March, 1885.”

(At this stage the proceedings were adjourned.)

Messrs. Leeson, Biggs, and Chamberlain again attended before the Royal Commission on Wednesday, 11th February, 1891. After a few questions, the Chairman (Lord Herschell) said to Mr. Chamberlain :—Would you continue the historical summary of the facts which is presented by the Guardians in the document you were proceeding to read when we broke off on the last occasion ?

Mr. Chamberlain then proceeded :—

“Subsequent events proved that this demon-
 “stration practically settled the question of
 “compulsion in Leicester. At the election of
 “Guardians in 1886, the principal question before
 “the electors was that of enforcing vaccination.
 “A large majority of the candidates expressed
 “themselves against the principle of compulsion,
 “and with few exceptions these were returned.
 “The votes cast for the opponents of compulsion
 “rose from about 41,000 in 1883 to nearly 48,000
 “in 1886, while the votes for the advocates of pro-
 “secutions fell from about 31,000 in 1883 to about
 “20,000 in 1886. The result of the election was
 “seen in the fact that at the first meeting of the

“ newly-elected Board notice was given to rescind
 “ the order for prosecutions. On 4th May, 1886,
 “ this order was rescinded, on the motion of Mr.
 “ J. T. Biggs, after a long debate, by twenty-seven
 “ votes against eight. Since this decisive vote, no
 “ attempt has been made to reverse the decision
 “ then arrived at, and on the completion of
 “ the prosecutions then in progress, prosecutions
 “ entirely ceased.

“ At the third triennial election of the Guardians
 “ in 1889, the vaccination question once again
 “ monopolised attention. Such was the force of
 “ public opinion evidenced by the falling off in
 “ vaccinations from 3,730 in 1873 to 332 in 1887,
 “ that almost all the candidates voluntarily pledged
 “ themselves against compulsion. The votes for
 “ candidates opposed to compulsion still further
 “ increased from 48,000 in 1886 to over 66,000 in
 “ 1889, while those cast for the few advocates of
 “ compulsion declined to about 4,500 from 20,000
 “ in 1886.

“ In every contested parish excepting one, the
 “ opponents of compulsion carried their candidate
 “ at the head of the poll; and in all parishes
 “ excepting two, where more than one member
 “ was required, they carried the whole of the seats.
 “ At the first meeting of the new Board, notice of
 “ motion was given to endorse the previous non-
 “ prosecuting policy of the retiring Board. On
 “ 30th April, 1889, on the motion of Mr. J. W.
 “ Goddard, this policy was once more emphasised
 “ by the significant majority of thirty-one votes
 “ against three. A number of deputations of
 “ ratepayers and others have at various times

“waited upon the Board, and their representations
 “as to the administration of the law have received
 “the careful consideration of the Guardians.

“Such is the position of the question in Leicester
 “at the present day. In presenting these papers
 “to the Royal Commission, the Leicester Board of
 “Guardians wish respectfully but emphatically to
 “declare that, in their deliberate judgment, the
 “law of compulsory vaccination can never again
 “be enforced in Leicester.”

After the reading of this Memorial, a brief examination of the deputation followed. Since that date (1891), no change has taken place in the policy of the Board ; but in 1898 (nine years after the appointment of the Royal Commission) the Local Government Board authoritatively pronounced that the Vaccination Officer was independent of the Guardians, and could prosecute defaulters either on his own authority or that of the Local Government Board, the Guardians being treated in this matter as a *quantité négligible*.

The setting up of this claim not only led to a further strenuous struggle, recorded further on, between the Leicester Guardians and the Local Government Board, but caused considerable difficulty and friction with Boards of Guardians all over the country.

CHAPTER XXX.

ROYAL COMMISSION WITNESSES.

EVER since the penal enforcement of vaccination, under the Act of 1867, Leicester has been in the forefront of the opposition to this sinister fad of the medical profession. On the appointment of the Royal Commission, it became necessary that such evidence as Leicester could present should be prepared without delay. Many of her most prominent citizens proffered to appear before the Commission, including the Mayor, several ex-Mayors, a number of Magistrates, Aldermen, Councillors, Guardians, and Members of the School Board. The chairmen of all the three authorities mentioned attended, as well as the Town Clerk and the Clerk to the Board of Guardians; also a number of parents testified as to injuries their children had suffered from vaccination, such injuries in many cases having terminated in death. Indeed, the testimony from Leicester occupied most of the time of the Commission during the year 1891.

LIST OF LEICESTER WITNESSES, AND A SYNOPSIS OF THEIR TESTIMONY.

Some idea of the character of the witnesses who attended from Leicester before the Royal Commission, and of the evidence they gave, may be formed from the appended synopsis, which is

arranged alphabetically, and abstracted from the Fourth Report :—

BALL, WILLIAM (Shoe Riveter).—Believed his brother's death, and other cases of injury which had come under his notice, were caused by vaccination. Had been fined, and suffered imprisonment for refusing to pay. Answered 36 questions.

BANBURY, JOHN (Whitesmith).—Was opposed to vaccination, and had been fined for each of three children. His daughter, after training to become a pupil teacher, and passing all examinations, was very unjustly treated, and defrauded of the usual grant, on account of not having been vaccinated. Answered 23 questions.

BARFOOT, WILLIAM (Merchant).—Was a Magistrate, Member of the Town Council, Alderman, and had been Guardian and Mayor of the Borough. Considered that vaccination should not be compulsory, and that a reasonable excuse ought to be accepted in lieu of the imposition of a fine by the Justices. Answered 24 questions.

BIGGS, JOHN THOMAS (Sanitary Engineer).—Member of the Town Council, Alderman, Magistrate, and Member of the Derwent Valley Water Board. For many years a Member of the Leicester and Barrow-on-Soar Boards of Guardians. Was selected as one of the deputation to present the Leicester Town Council resolutions to the Commission. Also appointed by the Leicester Board of Guardians as one

of the deputation to present their Memorial and Statistical Tables. Opposed compulsion from the outset of looking into the subject on the broad ground of its infringement upon, and invasion of, personal liberty. During the small-pox epidemic of 1871-73 closely studied the outbreak, and the causes which led up to the prolongation and severity of the visitation, and became convinced of the inefficacy of vaccination to prevent the disease or mitigate its type. One of his brothers also suffered through vaccination. He withstood several prosecutions, and had three distress warrants issued, and his household goods were sold by the instructions of the Board of Guardians of which he was a member. Answered over 3,000 questions. For twenty-three years Mr. Biggs was a Member of the Leicester Sanitary Committee.

(These particulars concerning the author of this volume are contributed by one who knows and keenly appreciates Mr. Biggs's work for the anti-vaccination movement.)

BRUCE, HENRY BAILEY (Elastic Web Manufacturer).—Believed his third child died from the effects of vaccination. It expired very suddenly fourteen days after the operation, and the verdict of the jury stated that the cause of death was "convulsions," but Mr. Bruce replied:—"Yes; but the convulsions were brought on by the foul and filthy matter put into the child's system." Upon being fined subsequently, Mr. Bruce told the Magis-

trates :—"If I were to have forty more children, not one of them should ever be vaccinated," and he told the Commission of this circumstance. Was only asked 3 questions. Perhaps the Commissioners did not desire to hear too much of the testimony he was able to give! (Has since been a Member of the Town Council and Mayor of the Borough, and is a Magistrate.)

CAVEN, REV. ROBERT (Baptist Minister).—His experience convinced him that vaccination was useless as a preventive of small-pox, and that it was often followed by serious consequences. Had been fined several times at both Southampton and Leicester. Answered 50 questions.

CHAMBERLAIN, LIONEL PERCY (Solicitor, and Clerk to the Guardians).—Prepared and presented, by order of the Board of Guardians, official tables relating to the number of vaccinations, with a statement of the procedure of the Board upon the subject, and correspondence in 1845 with the Poor Law Commission. Answered 130 questions.

CHAMBERS, HENRY THOMAS (Retired Builder).—Had held office as Member of the Guardians, Councillor, Alderman, Magistrate, and Mayor of the Borough. Was one of the deputation selected by the Council to present a copy of its resolutions to the Commission. Was against compulsion, and in favour of exemption being granted. Answered 37 questions.

DUNS, JAMES (Chief Constable).—Attended in his official capacity, and verified the list of over

6,000 prosecutions, 193 distress warrants, and 64 commitments to prison, and referred to the exceptionally strong feeling against compulsory vaccination. He informed the Commission that, otherwise, Leicester was a very orderly town. Answered 23 questions.

EAGLE, CHARLES (Shoe Laster).—One of his children suffered seriously through vaccination, and he refused to have subsequent children vaccinated. Fined several times, and twice imprisoned. Answered 22 questions.

ELLIS, JAMES (Merchant).—Chairman of the School Board, and Member of Parliament for the Bosworth Division of the County. Officially presented resolution passed by the School Board against compulsory vaccination, and testified to the great and growing difficulty of obtaining pupil teachers, owing to the regulations of the Board of Education making vaccination imperative. Answered 16 questions.

ELLMORE, WILLIAM PAULGRAVE (Basket Manufacturer and Willow Grower).—Member of Barrow-on-Soar Board of Guardians. Had seen and was aware of many cases of ill-effects from vaccination, and in consequence refused to allow the operation to be performed upon his own children. Fined several times. Answered 50 questions.

EMMS, ALFRED WILSON, M.R.C.S. (Public Vaccinator for the Belgrave District, then a suburb, and now a part of Leicester).—Was a thorough believer in vaccination, and attended to contradict the statement of a parent who

alleged her child's illness and death had been caused by the operation which he performed. Had seen a few instances of erysipelas and inflammation through vaccination, but never a really bad arm or serious consequences, and said that the fatality under notice was unconnected with vaccination. Answered 162 questions. (Now a Magistrate for the County.)

FRITH, GEORGE (Marine Store Dealer).—Had been fined several times, and imprisoned because of his opposition to vaccination. Answered 14 questions.

HACKETT, HARRY (Newspaper Editor).—One of his children suffered seriously from eczema through vaccination. He had observed illness and death in a number of other instances from the same cause, so declined to have any more children vaccinated. Spoke of the strong feeling in the town against vaccination. Answered 45 questions.

HART, ISRAEL (Merchant).—Member of the Town Council, Alderman, Magistrate, and four times Mayor of the Borough, subsequently receiving the honour of Knighthood. Had adjudicated at the hearing of many summonses against vaccination defaulters, but disliked doing so on account of the highly respectable class of parents and their evident sincerity. Had heard of many cases of injury from vaccination, and it was such occurrences as those which had poisoned the minds of the people against the practice. He was strongly averse to compulsion. Answered 79 questions.

HART, MRS. KATE.—Gave evidence of the vaccination and consequent illness and death of her child. Refused to have others vaccinated. Answered 48 questions.

HODGSON, ROBERT (Cabinetmaker).—Mentioned several cases where illness had been caused by vaccination, and would not, therefore, have his own children operated upon. Fined twice, and suffered imprisonment. Answered 13 questions.

HOPPS, REV. JOHN PAGE (Unitarian Minister and Author).—Testified to the pronounced feeling against vaccination in Leicester. All classes—including Guardians, Councillors, and Magistrates—were opposed to compulsion. It was physically impossible to enforce the law. Soldiers from London would be required to do that, as the soldiers in the town would favour the anti-vaccinists. He knew doctors antagonistic to compulsion. Answered 19 questions.

IRONS, EDWARD HOLLIS.—One of his children suffered severely from the effects of vaccination, and he had also seen other examples where illness and death had followed as the result of vaccination. He would not permit any more children to be vaccinated, and had been repeatedly fined. Answered 37 questions.

JARROM, ANTHONY.—Gave details of the fatal illness of his son, Edward, due to vaccination, and refused to allow the operation to be performed on any more. Answered 45 questions.

KEELING, WILLIAM (Summoning Officer and Sergeant of the Borough Police Force).—Was responsible (when the law was set in motion by the Vaccination Officer) for the issuing of the summonses against defaulters, the execution of the distress warrants when fines and costs were not paid, and of commitments when persons went to gaol. Spoke of the deep-rooted antipathy of the townspeople to vaccination. Believed that one of his own children suffered seven years in consequence of the operation, and, accordingly, would not have his two younger children vaccinated. Had himself been summoned, and paid fines. Answered 33 questions.

KEMPSON, WILLIAM (Merchant and Manufacturer). Member of the Town Council, Alderman, Magistrate, and twice Mayor. Had judicially dealt with many of the vaccination prosecutions in the Borough Police Court, and alluded to the powerful antagonism to vaccination, which, in his opinion, ought not to be compulsorily enforced. Answered 35 questions.

LANKESTER, HENRY, M.R.C.S.—One of the deputation appointed by the Town Council to present its resolutions. In addition to being a Member of the Town Council, was a Magistrate, and Mayor in 1889, when the resolutions were passed. Believed in vaccination, but was not in favour of compulsion, because he respected the conscientious objections of parents, and said he "wished to do unto others as he would be done unto." Had

seen erysipelas result from vaccination. If an attempt were made to rigorously enforce the Acts, "it would not be tolerated for a moment ; there would be an uprising of the town against it." Answered 85 questions.

LEAVESLEY, JAMES (Boot and Shoe Manufacturer).

—Member of the Town Council, and of the Boards of Guardians of Barrow-on-Soar and of Leicester, being Chairman of the latter body in 1887. Believed that vaccination does not prevent small-pox, and is itself capable of communicating disease. Accordingly refused to have some of his children vaccinated. Fined several times. Cited a good many instances where injury and death had been the outcome of vaccination. Answered 64 questions.

(Note by the Author. — Words inadequately express my obligation to Mr. Leavesley for his helpful encouragement during the long time I gave evidence before the Royal Commission. But for his unfailing inspiration it would have been difficult for me to have sustained the trying ordeal, and I take this opportunity of placing my deep appreciation on record.)

LEESON, JOSEPH (Boot and Shoe Manufacturer).

—Town Councillor, and appointed by the Guardians to present their resolution, memorial, and statistical tables to the Royal Commission. Chairman of the Board of Guardians in 1889. In his opinion, the illness and subsequent death of one of his children was due to vaccination, and after that occurrence he took an active part in opposition to the practice. Answered 45 questions.

LUNN, CHARLES (Hosiery Manufacturer).—Through vaccination two of his children suffered from sore eyes, and accordingly he declined to let others run a similar risk. His father and uncle both had severe attacks of small-pox, despite having been inoculated. Read extracts from letters written to him by Mr. P. A. Taylor, M.P.; Mr. A. M'Arthur, M.P.; and Mr. John Bright, M.P. Answered 29 questions.

MASKELL, WILLIAM HENRY (Vaccination Officer for the Leicester Union since 1868).—Was called by the Commissioners to verify the vaccination returns, a clerical error having unduly increased the stated number of vaccinations by 900 in a single year. Answered 95 questions.

MATTS, HENRY (Retired Plumber and Glazier).—Objected to vaccination as an unnatural process, and refused, from the first, to have any of his nine children vaccinated. Was proceeded against for three, but would not pay the fines and costs imposed. Sent to gaol for ten days in default in each case, making thirty days—probably the longest imprisonment at one time. Was treated abominably and illegally whilst under detention, and the Governor was afterwards compelled to apologise for his conduct. Indignation meetings were held to protest against the action of the authorities. Answered 21 questions.

NEALE, JOHN HEADLEY, M.B., M.R.C.P. (one of the Physicians to the Leicester Infirmary).—Called by the Commissioners respecting the

statement by Mrs. Hart that he said her child was suffering from blood poisoning when taken for treatment to the Infirmary. This he denied, and said the child was dying of Bright's disease. Had only seen one case of blood poisoning from vaccination. Answered 97 questions.

PAYNE, JOHN THOMAS (Shoe Riveter).—Two eldest children suffered through vaccination, and he had accordingly refused to have others vaccinated. Fined several times, and imprisoned twice. Answered 26 questions.

PEARSON, MRS. MARY ANN (Silk Winder).—Child ill after vaccination from the same lymph that Mrs. Hart's child died from. Another child, vaccinated at the same time, also succumbed, but its mother had passed away as well. Answered 54 questions.

PRATT, THOMAS (Master Painter and House Decorator).—After reading Mr. Jonathan Hutchinson's cases of vaccino-syphilis, decided not to have his children vaccinated. Fined several times, and furniture sold under distress warrant. Brought an action against the constables for excessive distraint. Verdict in his favour for £7. The County Court judge, in deciding, said he could not see any justification for taking goods worth £13, or even £3, to cover a fine and costs of only 12s. Answered 32 questions.

SADDINGTON, GEORGE (Framework Knitter).—Objected to vaccination because it was a violation of Nature's laws, and not a pre-

ventive of small-pox. Assisted in organising a committee to oppose the law. Fined several times, and imprisoned once. Answered 30 questions.

SMITH, REV. ALBERT (Church of England Clergyman).—A younger brother suffered from vaccination, and he had also seen other cases in which vaccination had caused ill-effects. Only one of his children out of a family of ten had been vaccinated, and that was at the time of witness's ordination, with which any prosecution would have interfered. But the operation was only allowed to be performed in one place, and his wife removed the lymph by rubbing it off. Was afterwards several times prosecuted. Answered 36 questions.

SMITH, WILLIAM (Shoe Riveter).—Attributed illness of one of his children to vaccination, so refused to submit others. Fined twice, and once imprisoned in default of payment. Answered 35 questions.

STAFFORD, JOHN (Merchant).—One of the deputation appointed by the Town Council to present their resolutions. Member of the Town Council, Alderman, Chairman of the Board of Guardians in 1857-59, Magistrate, and twice Mayor of the Borough. Adjudicated in more vaccination cases than any other Justice of the Peace. Was impressed by the character of the defendants. "They were really thinking people; the better class of working people, who really thought for themselves, and had

very strong conscientious convictions on the subject." Had allowed exemption from penalty for reasonable excuse on several occasions, and was against compulsion. Answered 78 questions.

STAFFORD, JOSIAH (Farmer).—Sister suffered from convulsions and epileptic fits; a brother also suffered, and he believed both illnesses were caused by vaccination. Owing to this would not have his own children vaccinated. Answered 15 questions.

STOREY, JOHN (Solicitor, and Town Clerk of Leicester).—Attended with the deputation by request of the Council to present their resolutions. (Since appointed on the Commission of the Peace for the Borough.)

STRETTON, CLEMENT (Solicitor).—Member of the Town Council, Alderman, Magistrate, and twice Mayor. Adjudicated on many vaccination cases, and was of opinion the law should not be obligatory. The defaulters who came before him were of the better class, who opposed vaccination conscientiously, and whose opposition was very largely formed in consequence of injuries resulting from vaccination which they had seen. Answered 24 questions.

THORNTON, THOMAS WILLIAM (Farmer).—From his own experience had come to the conclusion that vaccination was useless as a preventive of small-pox. Mentioned cases where vaccination had produced injurious effects. Refused vaccination for his own children, and twice fined. Answered 10 questions.

TOLPUTT, MRS. HANNAH.—Gave particulars of her own child's illness, and had daily seen the child of Mrs. Hart during the illness which terminated in death. Answered 39 questions.

WARD, JOSEPH (Commercial Traveller, etc.).—Believed the illnesses of three of his children due to vaccination. Refused to have others operated upon, though one was done later on without his knowledge and consent. His brother-in-law died of small-pox in spite of having been "properly" (!) vaccinated. Fined a number of times, and twice imprisoned. Answered 40 questions.

WARDLE, MRS. EMMA (Widow Lady).—Gave particulars of illness and death of her son, Thomas, from vaccination. She refused to have other children vaccinated. Husband was prosecuted four times.

WINDLEY, THOMAS (Newspaper Proprietor).—Member of the deputation appointed by Town Council to present their resolutions. Member of the Town Council, Alderman, Magistrate, twice Mayor of the Borough, and Chairman of the Sanitary Committee for very many years. Explained to the Royal Commission at great length the "Leicester Method" of dealing with small-pox—notification, prompt removal to hospital, disinfection, isolation, quarantine, etc. The "Leicester Method" was instituted by Dr. Johnston, the Medical Officer of Health, in 1877. Told the Commission that "Isolation and other sanitary measures that we have adopted have secured us hitherto, and I do not

see any reason to fear their not having the same beneficial effects hereafter. I would rather trust it than any other system." The feeling against compulsion was universal. Did not think "any authorities—even a regiment of soldiers—would bring about vaccination by compulsion again in Leicester." It was intolerable to sell a man's goods, or put him in prison and subject him to hard labour. Told the Commission :—"I have seen men come out of prison with their hands lacerated with the hard labour they have been exposed to." Answered 67 questions. (Ald. Windley is still (1912) the Chairman of the Leicester Sanitary Committee, having occupied that position for no less than thirty-five years.)

WOOD, MRS. FANNY.—Gave particulars of her child's illness and death occurring after vaccination, and concerning which a Local Government Board inquiry was conducted by Dr. E. Ballard. Answered 67 questions.

WRIGHT, THOMAS (Solicitor).—Member of the Town Council, Alderman, Magistrate, twice Mayor of the Borough, and afterwards Knighted. President of the Leicester Anti-Vaccination League in 1883. Owing to cessation of prosecutions by the Guardians had never adjudicated on vaccination cases, but had previously undertaken the defence of several defaulters, and introduced a deputation to the Mayor and Magistrates, asking them to reduce the penalties inflicted when they felt convinced that the defendants were actuated by conscientious convictions. Had been largely

influenced in his opposition to vaccination by a distressing case in the family of a Northampton coachbuilder, named Davies, whose daughter had died a horrible death from vaccino-syphilis, after several years of fearful suffering. Answered 34 questions.

PART IV.

STATISTICAL EVIDENCE.

CHAPTER XXXI.

A LENGTHY EXAMINATION.

My personal share in the presentation of the Leicester evidence was not inconsiderable. I had to appear more times, and to answer more questions (over 3,000 in all), than any other witness. The Commission kept me at full pressure. Consequently, the strain was tremendous, both physically and mentally. Possibly it was expected that the breakdown of my testimony would mean the collapse of the Leicester case. Fortunately, this did not occur. I produced, before the Commission, no fewer than fifty-one statistical tables and fifteen diagrams, upon which I had to bear a searching, rigorous, and critical examination by leading medical and scientific experts. Although I did my best to oblige the Commission in every possible way, sparing neither time nor labour in order to comply with their requests, they never appeared quite satisfied. I often thought it was a difficult task for them, to give the impression of being as impartial as their high position and responsibilities required.

In any event, the mass of evidence presented from Leicester alone was sufficient to have secured the absolute and entire repeal of the law. It would undoubtedly have done so before an unbiassed Commission. Another inquiry, before an altogether differently constituted tribunal, is, therefore, loudly called for, and ought (in common justice and equity) to be granted ere long.

Over 1,000 questions were addressed to me on account of an error in the official figures for Leicester vaccinations. No doubt it was hoped to prove the error was mine, but the officials who furnished the figures to me were sent for, and it was found to be their error in casting up. The investigation disclosed a more accurate method of computation than the official one, so eventually I asked the Commission which set of figures they wished me to use. However, they would not commit themselves, but left the decision to me. I therefore abandoned the official set—which were proved to be wrong, in many respects—and adopted the much fairer plan, especially to the opposite side, of taking all vaccinations registered in each year, irrespective of age. This necessitated the rectification of many thousands of figures, and practically the reprinting of the whole of my evidence. Some idea may be gathered of the labour this involved by the fact that the revision of proofs caused by the introduction of this new (and more accurate) set of figures occupied nearly two years after my evidence before the Royal Commission had been completed.

CHAPTER XXXII.

VACCINAL INJURIES AND DEATHS AT LEICESTER.

I PRESENTED a table (pages 417-433, Fourth Report, Royal Commission) of 109 deaths, 186 cases of injury (many of them permanent), and two of small-pox, following on vaccination, being a total of 297 cases in Leicester and neighbourhood, with the names, addresses, and details, each case being vouched for by the parents themselves. It is a harrowing, heart-rending catalogue. This gruesome testimony caused considerable questioning by the Commissioners, who, however, hesitated to accept such personal statements, unless supported by expert medical opinion! The evidence of careful, loving mothers, who had unintermittently tended their suffering little ones, was, it seems, not deemed trustworthy without being thus peculiarly confirmed! Was it likely that medical men would convict either themselves or their brethren? Manifestly, those parents (who had "accepted" vaccination) must have been in its favour, rather than against it. Otherwise their children would certainly not have been vaccinated.

But who can fully realise what a dreadful amount of trouble, of loss, of pain, and of sorrow and suffering those 297 cases meant to the parents and families—as well as to other relatives—of the unfortunate victims? These people had been

anxious to comply with the requirements of a cruel law, and such compliance had resulted in life-long injury to many of their children, and death to others. Now the dreaded arm-to-arm vaccination to which they objected, and through which their children suffered, is officially condemned. What justification could be found for enforcing so dangerous and risky an operation? Need anyone feel surprised that there should be strenuous opposition to so repulsive a legal enactment?

It should be borne in mind that particulars of many of these cases could only be obtained with the greatest difficulty, owing to the strong desire for reticence, and to avoid publicity, on the part of parents and friends. Personally, I always avoid speaking to others about vaccination. But the subject is often introduced voluntarily by those who know my opinions, and nearly all those who speak to me give instances of injury, or death, either in their own families or in those of their friends. Especially has this been the case with medical men, who usually know of some injuries occurring to the patients of other practitioners!

It is obvious, therefore, that the injuries and deaths which are made public are not a tithe of those which actually occur. Even if a single case of injury or death could be proved, it condemns the law which enforces the operation even more than the pernicious practice itself.

Unfortunately, the evidence of Leicester does not stand alone in respect to injuries and death

following, and being attributable to, vaccination. Many terrible disasters, of permanent injury, disease, and death, are recorded in the annals of the evidence given to the Royal Commission, and in innumerable accounts elsewhere. I refer to these later on.

CHAPTER XXXIII.

ERYSIPELAS AND VACCINATION.

Soon after my first appearance before the Commission, the subject of erysipelas came up. When it was found I had not prepared any tables on this point, it seemed to be assumed there was something to hide, and I was requested to go into the matter, and prepare a table for the next meeting—a request with which I willingly complied. But the time allowed was too short to enable me to tabulate returns for more than sixteen years—viz., 1874 to 1889. This table was divided into periods of four years each, and has now been continued in the same form to 1909, as follows:—

TABLE 1. (See Diagram A.)

Being Table 2, page 416, Fourth Report, Royal Commission, continued to 1909.

Table showing for the BOROUGH OF LEICESTER, for each of the periods 1874-77, 1878-81, 1882-85, 1886-89, 1890-93, 1894-97, 1898-1901, 1902-05, and 1906-09, the average annual death-rate from erysipelas, of children under one year of age per 10,000 births, of children under five years of age per 100,000 living at that age, and at all ages per 100,000 of the population; with the average annual percentage of vaccinations to births* during each period,

DIAGRAM A.

ILLUSTRATING TABLE 1.

ERYSIPELAS. LEICESTER.

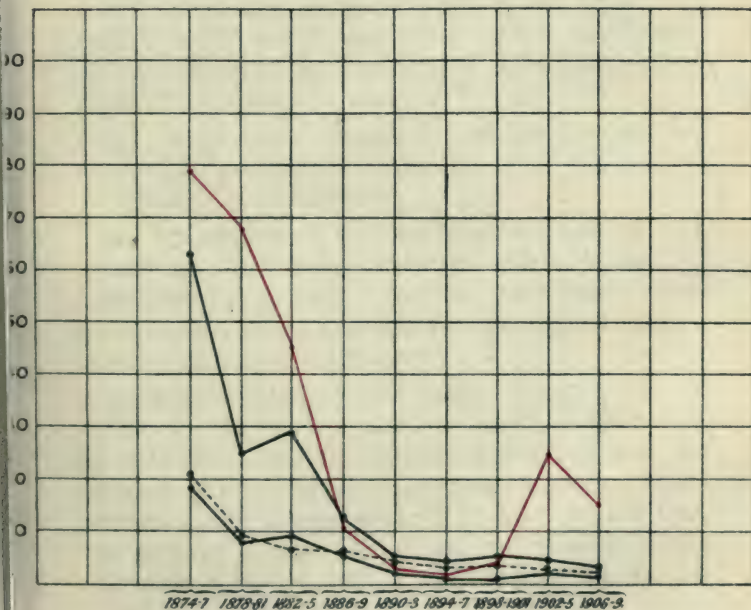
IN GROUPS OF FOUR YEARS, 1874-1909.

Lower Solid Curve—Average annual death-rate from Erysipelas under 1 per 10,000 births.

Upper Solid Curve—Average annual death-rate from Erysipelas under 5 per 100,000 living at that age.

Dotted Curve—Average annual death-rate from Erysipelas at all ages per 100,000 population.

Red Curve—Average annual percentage of registered vaccinations to the total births.



1874-7 1878-81 1882-5 1886-9 1890-3 1894-7 1898-1901 1902-5 1906-9

Period.	Average Annual Death-Rate from Erysipelas for infants under One Year, per 10,000 Births.	Average Annual Death-Rate from Erysipelas for children under Five Years, per 100,000 Children living at that age.	Average Annual Death-Rate from Erysipelas at all ages, per 100,000 Total Population.	Average Annual Percentage of Registered Vaccinations to the Total Births.*
1874-77	19·3	64·0	21·0	79·4
1878-81	7·9	24·8	9·2	67·4
1882-85	9·4	29·4	6·2	45·1
1886-89	4·7	12·6	5·2	10·8
1890-93	2·0	5·8	5·1	2·8
1894-97	1·2	4·3	3·5	1·5
1898-1901	1·6	6·0	3·9	5·0
1902-05	2·5	5·5	2·7	25·0
1906-09	0·9	2·5	1·1	15·5

* For the actual number of annual vaccinations, see Table 50.

The most striking points in Table 1 are :—

(1) That the highest death-rates from erysipelas, both under one year, under five years, and at all ages, are concurrent with the highest years of vaccination ; and

(2) That each death-rate practically touches its lowest point coincidentally with the lowest percentage of vaccination.

By no stretch of the imagination, nor by any subterfuge, can these facts be made to tell in favour of vaccination. On the other hand, there is abundant and undeniable evidence that the practice operated most fatally.

Another feature of this table is that a rise in the death-rate from erysipelas, shown in 1898-1905, for infants under one year, is concurrent with an increase of vaccination in the same periods, caused principally by the more rigid pressure of the law, just before, during, and after the passing of the Vaccination Act of 1898. In this year—under an

Order of the Local Government Board—stational vaccination was superseded by the domiciliary visits of the Public Vaccinators, whose services were also then remunerated with enormously increased fees. It is, however, satisfactory to notice that the decline in this death-rate of infants is resumed, doubtless to some extent because of the enhanced vitality, and, therefore, increased power of resistance, which children born of unvaccinated parents are enabled to offer to attacks from this disease.

It is suggestive that, after such conclusive proofs condemning vaccination, further evidence on this aspect was not asked for by the Commission. Its introduction, however, involved a reference to, and the embodying of several official reports in the published evidence, which are of such supreme importance that I now make a brief reference to each of them. These reports are published in full at pages 466-494, Fourth Report, Royal Commission.

CHAPTER XXXIV.

OFFICIALLY AUTHENTICATED DEATHS FROM VACCINATION.

VACCINAL DEATHS AT MISTERTON.

FIRST, there was the report, in 1876, to the Local Government Board by Mr. J. H. Radcliffe (one of the Board's Inspectors), on certain fatal cases of erysipelas in the Misterton District of the Gainsborough Union, Lincolnshire. That inquiry showed that erysipelas, admittedly caused by vaccination, had resulted there in at least six deaths—and probably more. In his report the Inspector referred to "the use of dirty lancets," or "dirty points," "erysipelatous or septic mischief," "glandular irritation," and to "a peculiar tendency to the spread of erysipelas" existing in the district. (See Commission's Fourth Report, page 466.)

In passing, it is significant to note that this official inquiry elicited the fact that these six little victims of vaccination had all been buried under misleading death certificates, no word as to vaccination appearing on any of those documents. That practice of "preserving vaccination from reproach" is believed to be common, and if the suspicion be well founded, it shows how our national vital statistics are considerably vitiated and the public deceived.

VACCINAL DEATHS AT NORWICH.

Another Local Government Board Inquiry of the same kind was held at Norwich, in 1882, by Mr. J. J. Henley and Dr. Airy. This was due to a complaint made by Mr. Lee Bliss, of Norwich, "that eight cases of death and injury had resulted" in that city after vaccination by the local Public Vaccinator. As in the other inquiry, the lymph was made to appear blameless! The Inspectors condemned the "crowded" vaccination station, and, curiously enough, while stating "that no blame was proved to attach to the Public Vaccinator" in the performance of his duties, forthwith reprimanded him for "using again and again the same ivory points." They said:—"We consider that it was an error of judgment on his part" to continue vaccination while in attendance on erysipelatos cases. (See page 478, Fourth Report, Royal Commission.)

It may be here observed that, in this Norwich disaster, there were four deaths, three of which were misleadingly certified, no mention of vaccination appearing on any of those death certificates. These, so to speak, accidental revelations as to falsely certifying, occurring as they do in different parts of the country, are eloquent in their suggestiveness as to the widespread prevalence of the discreditable "hushing-up" business.

VACCINAL DEATH AT DERBY.

A similar Local Government Board Inquiry was held, in 1882, at Derby, by Dr. F. W. Barry, owing to the death of a child following vaccination. In

this instance the Public Vaccinator did not even hold a certificate of "proficiency in vaccination"! It was found that he had used a lancet "without a point, rusty and dirty; the vesicle opener also rusty and dirty." One of the tubes was coated inside with "albuminous matter"; others contained "opaque lymph," and one "a little blood." Some tubes were not even sealed, but contained "opaque lymph, slightly bloody." It was reported that the "septic infection" was inoculated into the child "from some dirty appliance" used by this model (!) Public Vaccinator. He was further censured for "erroneous entries in the Register." (See page 484, Fourth Report, Royal Commission.)

VACCINAL DEATH AT LEICESTER.

Still another inquiry was held, at Leicester, in 1888, respecting the death of a child at New Humberstone from "diffuse cellulitis" (a euphemism for vaccinal poisoning of the cellular tissues). Dr. Barry, who held this inquiry, described the term as a "euphemism," but carefully avoided blaming vaccination. He censured the Public Vaccinator, the Rural Sanitary Authority, some inoffensive poultry, piggeries, etc. He severely blamed the parents, but considerately (!) abstained in his report from censuring either the bereaved parents or their deceased child. The erysipelas, he said, was "traumatic." (See page 494, Fourth Report, Royal Commission.)

It will be noted that, in all these important public inquiries, only the few victims discovered by laymen were the subjects of official investigation, and, all through, only the operators, or their

inethods, were denounced, while little or no blame was attributed to vaccination—the root cause of all the disasters.

These Public Vaccinators are the sort of men to whom parents are compelled by statute to submit their healthy children for the deliberate inoculation of virus from the foul cattle disease of cow-pox! What makes matters worse, it is to the pecuniary benefit of these Public Vaccinators to carry out such dangerous and objectionable “processes” of law.

CHAPTER XXXV.

THE REGISTRAR-GENERAL'S GHASTLY STORY.

FINALLY, there is that ghastly catalogue of vaccinal deaths, compiled from the Registrar-General's own returns. Such has been the damning evidence of this official record that, in 1902, the Registrar-General discontinued his former nomenclature. Although the phrase, "effects of vaccination," appears in his annual reports, the heading in the weekly returns is deaths from "Cow-Pox" only. The limiting tendency of this alteration is thus apparently effecting a considerable, but illusory, reduction in this "cloud of witnesses" against vaccination. Even this distinction has since disappeared from the weekly returns. In a footnote, it is stated that—"Commencing with 1911 considerable modifications were made in the form of this return." Explanations of these modifications are given, but no mention is made of the transfer to another classification of the deaths from "Cow-Pox or Other Effects of Vaccination." These deaths from cow-pox and other effects of vaccination may, or may not, be included under the heading, "Other Epidemic Diseases." Apparently they are now to be buried beyond recognition, to save vaccination with "glycerinated calf lymph" from reproach.

TABLE 2.

Being Table 3, page 416, Fourth Report, Royal Commission, continued to 1909.

Table showing, for ENGLAND AND WALES, for each of the years 1859-80, the number of deaths registered from "Erysipelas after Vaccination," and for each of the years 1881-1909, the deaths registered from "Cow-pox and other effects of Vaccination"; also for each of the years 1898-1909, the deaths registered from "Cow-pox," "Effects of Vaccination," etc., after the passing of the "Conscience Clause" by Parliament, and the "limiting" alteration of nomenclature by the Registrar-General.

Extracted from the Annual Returns of the Registrar-General.

Period.	Years	Number of Deaths.	Average Annual Deaths.	Total Deaths in Period.
1859-67 (nine years). Vaccination obligatory.	1859	5	6.8	61
	1860	3		
	1861	2		
	1862	3		
	1863	11		
	1864	13		
	1865	10		
	1866	10		
	1867	4		
1868-71 (four years). Vaccination enforced by penalties, under the Act of 1867.	1868	9	18.0	72
	1869	19		
	1870	20		
	1871	24		
1872-80 (nine years). Vaccination more rig- orously enforced under the Supplementary Act of 1871.	1872	16	28.5	257
	1873	19		
	1874	29		
	1875	37		
	1876	21		
	1877	29		
	1878	35		
	1879	32		
	1880	39		

Period	Years.	Number of Deaths.	Average Annual Deaths.	Total Deaths in Period.
1881-97 (seventeen years). Vaccination still rigorously enforced, as in period 1872-80, but deaths now registered as "Cow Pox and other effects of Vaccination"	1881	58	50·8	863
	1882	65		
	1883	55		
	1884	53		
	1885	52		
	1886	45		
	1887	45		
	1888	45		
	1889	58		
	1890	43		
	1891	43		
	1892	58		
	1893	59		
	1894	50		
	1895	56		
	1896	42		
	1897	36		
1898-1910 (thirteen years). Enforcement of Vaccination modified by "Conscience Clause" Act of 1898, and Amending Act of 1907. Also nomenclature practically limited to "Cow-Pox"	1898	26	21·3	277
	1899	34		
	1900	25		
	1901	17		
	1902	22		
	1903	26		
	1904	28		
	1905	26		
	1906	29		
	1907	12		
	1908	13		
	1909	11		
	1910	8		

Total number of deaths registered from "Erysipelas after Vaccination," and from "Cow Pox and other effects of Vaccination," 1859 to 1910: 1,530.

The Registrar-General, in his Report for 1897, referring to the 36 deaths for that year in the above table, says:—"The 36 deaths ascribed to 'effects of vaccination' include not only the deaths that were directly referred to vaccination,

"but also those that were stated in the medical certificates, or were found on inquiry to have been caused by the entrance of any noxious material whatever at the site of vaccination."

Obviously, the foregoing table is a mere "indicator," rather than a full and complete record, of the fatal effects of vaccination, to say nothing of permanent or other serious injuries inflicted.

The appended is a notable example of the latter state of affairs :—

In June, 1902, Dr. W. J. J. Stewart presented to the Hospitals Committee of the Metropolitan Asylums Board his report on the vaccination of certain workmen who were engaged on the extension works at Gore Farm Lower Hospital. Singular to relate, this important and remarkable document does not appear to have been published along with the other usual weekly reports. The particulars are most sensational, and that may account for the exceptional treatment of this report.

Of 587 men vaccinated, no fewer than 166, or more than 28 per cent., actually went on the sick list as the result of vaccination. They received sick-pay at the public expense, the contractors also being compensated for loss of their services. To overcome the natural reluctance of the men, a bribe of 5s. was offered to each one of them, as an inducement to be vaccinated. "Every precaution" was taken, and all the Local Government Board regulations were most rigidly observed. The "lymph" was of the purest and most approved blend, and was obtained from

Faulkner's Vaccine Institution, Endell Street, London, W.C., and the Association for the Supply of Pure Vaccine Lymph, Pall Mall, London, W.

The men were of the strongest possible physical type. Notwithstanding all those advantages, consequent upon the operations, 35 men were off duty with fever, an average of 5.5 days each; 125 men were off duty with septic inflammation, an average of 6.8 days each; 3 men were off duty with abscesses, an average of 34.6 days each; 3 men were off duty with general pustular eczema, an average of 23.0 days each—giving a total of 166 strong men on sick-pay for an average of 7.4 days each.

That "preventive" process was carried out at a cost of £2 15s. 9½d. for each of the 166 patients, and a grand total expenditure was incurred of no less than £1,029 10s. 2d.

If such is the "benign" (?) effect of carefully prepared glycerinated calf lymph, scientifically administered to the strongest and most able-bodied workmen, what must be the possibilities of its effects on tender infants, or persons of weakly constitutions?

If these facts were placed before parents, there are very few who would venture to submit either themselves or their children to the "propitious" influence of such "carefully prepared glycerinated calf lymph."

Moreover, who can tell what permanent impairment of health has been inflicted upon the 166 men who suffered so severely? Certainly not those gentlemen who performed the operation.

CHAPTER XXXVI.

SMALL-POX IN LEICESTER.

THE history of small-pox in Leicester forms an important and striking chapter in its municipal life. Situated in a water-logged valley, through which runs the River Soar—probably the most sluggish in its flow of any of the rivers in Great Britain—with a population growing too rapidly for its sanitary arrangements, its consequent overcrowding, indifferent drainage, flooding, and other circumstances, the town deteriorated so much that it is again and again referred to in the Registrar-General's earlier reports as one of the most unhealthy in the country. In his eighth and ninth annual reports, for 1847-48, page 43, that official remarks:—"Leicester is an unhealthy district; the average mortality is high."

Like London and other large cities and towns which had neglected sanitation, Leicester suffered from a recurrence of epidemics—small-pox, fevers, and plague following each other in rapid and grim succession. Until a comparatively recent date, small-pox was regarded as an assured and constant visitor every few years. Small-pox inoculation, in its day, was as rife in Leicester as anywhere. The practice of vaccination fol-

lowed, but there are no reliable official records obtainable as to the precise amount of vaccination earlier than 1849. At that date, the registers show that over 74 per cent. of the children born were vaccinated, consequently there must have been a considerable volume of vaccination before that time. This increased to nearly 93 per cent. in 1854, and, although varying in amount, kept at a fairly high level, reaching an unusual figure in 1863, and its maximum in 1872, both being times of exceptionally severe small-pox epidemics, especially that of 1872.

It is futile, therefore, for anyone to allege that, in the great pandemic years of 1871-73, Leicester was an unvaccinated—or, to use the modern medical term, an “unprotected”—community. Whatever “protection” vaccination could afford as a preventive of small-pox, Leicester undoubtedly enjoyed at that time. But in those dreadful and fateful years, several thousands of our “protected” (?) people were mercilessly attacked by small-pox, until the fruitless attempt to count the numbers was abandoned in despair, and the required information entirely lost. The fearful death roll of 360 victims formed the only basis upon which any sort of calculation could be made as to the approximate number of small-pox cases which then occurred in the town.

Need anyone wonder that the belief in the prophylactic virtues of vaccination rapidly dwindled? Particularly so, because with the decline of vaccination came a diminution not only of small-pox, but also of all kindred zymotic

diseases. Small-pox is at the time of writing (1912) almost a thing of the past.

Tables 11 and 12, presented to the Royal Commission, now embodied in one table, No. 3, and their explanatory diagrams, prove that:—

(1) There was an enormous rise in small-pox mortality after more than a quarter of a century of continuous vaccination prior to 1872, at which date occurred the greatest and most fatal small-pox epidemic ever known or recorded in Leicester for over half a century.

(2) That from 1872 a rapid decline of vaccination took place, and that such decline is coincident with the lowest small-pox mortality known until that time.

(3) That with the practical abandonment of vaccination, and the introduction and perfecting of the "Leicester Method" of Notification, Sanitation, Isolation, Quarantine, Disinfection, Observation, etc., small-pox mortality has become, to all intents and purposes, extinct.

TABLE 3.

Being Tables 11 and 12, Fourth Report, Royal Commission on Vaccination, continued to 1910.

Table showing, for the BOROUGH OF LEICESTER, during the years 1838-1910, in quinquennial periods—(1) the total number of small-pox deaths; (2) the average annual small-pox death-rate per 1,000,000 living; (3) the average annual registered vaccinations per 1,000 births; (4) the average annual vaccinations per 25,000 population; (5) the accumulated vaccinations per 100,000 population for five years, ending with the last year of each period; and (6) the average annual number of Sanitary Orders served for the abatement of nuisances.

Period.	Number of Small-Pox Deaths.	Average Annual Small-Pox Death Rate per 1,000,000 Living.	Average Annual Registered Vaccinations per 1,000 Births.*	Average Annual Vaccinations per 25,000 Population.	Accumulated Vaccinations per 100,000 Population for five years, ending with the last year of each period.	Average Annual Number of Sanitary Orders.
1838-42	148	592	Not known.	Not known.	Not known.	Not known.
1843-47	186	679	Returns incomplete.	Returns incomplete.	Returns incomplete.	Not known.
†1848-52	156	525	628	599	9,424	Not known.
1853-57	29	91	802	752	14,653	397
1858-62	59	175	659	609	11,603	351
*1863-67	124	316	769	794	14,544	501
1868-72	359	773	917	955	18,047	1,133
1873-77	9	17	800	850	16,219	2,619
1878-82	8	13	667	661	12,582	1,882
1883-87	3	4	299	265	4,995	6,529
1888-92	6	7	34	27	538	8,640
1893-97	15	17	21	16	326	8,878
1898-02	5	5	82	52	1,207	6,673
1903-07	25	23	235	153	3,059	5,284
1908-10 (3 years)	0	0	114	64	1,696	4,992

† The vaccination returns do not embrace 1848, being "not known" prior to 1849.

* For the actual number of annual vaccinations and the extra vaccinations, 1863-64, see Table 50.

CHAPTER XXXVII.

LEICESTER SMALL-POX EPIDEMICS COMPARED.

It is true that since 1872 there have been outbreaks of small-pox in Leicester, but, in each instance, the disease has not only been imported from well "protected" localities, but, as usually happens, these outbreaks started with well vaccinated or revaccinated cases. Two of those invasions—viz., in 1892-94 and 1902-04—resulted in what were termed "epidemics." Notwithstanding the fact that well vaccinated communities were also attacked, and suffered to a far worse degree than Leicester, the strong and definite attitude it has taken against vaccination made the town once more the target of innumerable venomous shafts from the pro-vaccinists.

They appeared to have overlooked the fact that in 1871-73, with nominally all the inhabitants vaccinated, 360 small-pox deaths occurred in a population of about 98,000, being a death-rate of 3,673 per million living. Whereas, in "unprotected" Leicester, in 1892-94, there were only 21 small-pox deaths in a population of about 182,000, being only 115 per million living; and in 1902-04 there were only 30 small-pox deaths in a population of about 220,000, or only 136 per million living.

The table below gives these figures, for purposes of comparison, in graphic sequence; also

the percentage of vaccinations to births at each period, and the proportions of vaccinations to population :—

TABLE 4.
THREE EPIDEMICS OF SMALL-POX IN LEICESTER
COMPARED.

Years.	Popula- tion (approx- imate).	Small- Pox Cases.	Small- Pox Deaths.	Death- Rate per Million Living.	Percentage of Vaccina- tions to Births.	Vaccina- tions per 100,000 Population.
1871-3	98,000	*	360	3,673	90·4	3,853
1892-4	182,000	366	21	115	3·3	93
1902-4	220,000	731	30	136	27·8	769

* This was before the "Leicester Method" was known, and the authorities, mainly relying on vaccination, were so overwhelmed and disorganised by the outbreak that all efforts to ascertain the number of cases proved unavailing.

The number of small-pox cases in this and subsequent Tables accord with the revised figures in Dr. C. K. Millard's Health Report for 1912.

What if these figures could be reversed? For example, suppose the small-pox death-rate in the "protected" period of 1871-73 had been only 115 or 136 per million living, and the small-pox death-rate in the "unprotected" periods of 1892-94 and 1902-04 had been 3,673 per million living, would not pro-vaccinists have claimed it as a great triumph for vaccination? There can be little doubt that they would have deemed themselves perfectly warranted in so doing. Why, then, do they hesitate to admit, in the opposite direction, the only logical conclusion which can be deduced from such convincing facts as have been given to the world by the experience of Leicester?

It must be borne in mind that the epidemic of

1871-73 found a fully vaccinated population in Leicester, both infantile and adult, whilst those of 1892-94 and 1902-04 occurred in populations essentially unvaccinated. A yet more striking feature is that in 1892-94 there were, approximately, 50,000 unvaccinated children in the town; and in 1902-04 there would not be fewer than 70,000 unvaccinated children in Leicester, nearly all of whom passed through these epidemics entirely unscathed. Only very few children, indeed, were attacked.

Who, then, can blame Leicester people for giving up the nostrum of vaccination? With such an object-lesson before their very eyes, it would indeed have been strange had they done otherwise! Yet the medical journals have continued to denounce Leicester for taking up an attitude against vaccination, which not only entirely accords with reason and common sense, but is justified to the full by its own unimpeachable experience.

CHAPTER XXXVIII.

IMPORTATIONS OF SMALL-POX.

It must not be supposed that Leicester owes its immunity from small-pox for so many years to the absence of the disease from its midst. On the contrary, many invasions and importations of the infection have occurred. It is an impressive and remarkable fact, that these importations of small-pox were by vaccinated persons coming from towns and districts where vaccination had been efficiently carried out, well up to the approved Local Government Board standard.

The following table gives not only the importations of small-pox from 1874 to 1889, the last year included in my evidence before the Royal Commission, but also those which have since taken place down to the end of the year 1910, with the number of small-pox cases and deaths, the fatality rate, and the average annual registered vaccinations to births:—

TABLE 5.

Years.	Number of Importations.	Cases.	Deaths.	Percentage of Fatality.	Average Annual Registered Vaccinations to Births.
1874-89 (16 years)	33	116	18	15·5	50·6
1890-1910 (21 years)	41	1,111	51	4·6	10·0
Totals	74	1,227	69	Average 5·6	Average 27·6

(See Diagram D, Fourth Report, Royal Commission on Vaccination.)

During the first period of sixteen years (from 1874 to 1889 inclusive), we had no fewer than 33 importations, resulting in 116 cases of small-pox and 18 deaths, giving a fatality rate of 15.5 per cent.

Since 1889 there have been 41 importations of small-pox, up to 1910 inclusive, resulting in 1,111 cases and 51 deaths, or a fatality-rate of only 4.6 per cent. The whole of this large number of recurring introductions of the disease were successfully and completely stamped out by the "Leicester Method," and the town saved from the further spread of the pestilence, with its potential ravages, without recourse to general vaccination.

Pro-vaccinists regarded it as a thing impossible and incredible that unvaccinated Leicester could, for even one year, much less for so long a period of years, successfully resist repeated and numerous attacks of small-pox. But such is now a stubborn, unimpeachable, and accomplished fact. Indeed, no other manufacturing town can show a better or cleaner record with respect to small-pox, and I question whether there is another large town, manufacturing or otherwise, at all comparable with Leicester, in the whole of the United Kingdom, which, with all the advantages that are claimed for vaccination, can equal, or even approach, the conspicuous success which stands to the credit of Leicester in this category.

There is still another aspect which also redounds to the good sense of the people of Leicester. Whenever an outbreak of small-pox occurs, there is an entire absence of "panic"

(excepting in the "protected" circles) such as usually occurs in efficiently vaccinated towns. No flaming posters are placed upon the walls to create alarm and excitement. The Sanitary authorities go about their work in a quiet, unostentatious (but, withal, thorough) manner, and this inspires confidence in the minds of the people, and at the same time allays their fears. Whatever stir or attempted scare occurs is outside the Borough, usually in medical publications, whose business, for many years, has been to fruitlessly endeavour to detract from the splendid results in dealing with small-pox which have been achieved by Leicester.

CHAPTER XXXIX.

ERRORS OF DIAGNOSIS.

IN addition to the danger arising from the foregoing 75 importations of small-pox, two of which resulted in epidemics—one in 1892 and the other in 1902—there has been the even greater danger occasioned through lack of knowledge on the part of medical men. Errors of diagnosis are plentiful everywhere, and are estimated at not less than 5 to 10 per cent. In London, in 1900, these errors were 32 per cent., and in 1901, 13.3 per cent. of the small-pox cases. The extraordinary instances which occurred here will suffice to show the danger which at one time threatened to engulf Leicester through this cause.

At the beginning of the outbreak in 1892, an error in diagnosis by the then Medical Officer of Health led to no less than 13 of the scarlet fever cases under treatment at the Hospital becoming infected with small-pox. Four of those patients died. That disaster was bad enough, but a worse blunder, almost amounting to a crime, followed. The 145 scarlet fever sufferers, all of whom had been exposed to small-pox, were actually hurried off out of the Fever Hospital, irrespective of their condition, direct to their homes. If the object of those responsible for this diabolical act had been to disseminate small-pox throughout the length

and breadth of the town, no more effectual means could well have been devised.

Yet, notwithstanding this risky, unparalleled, and unpardonable action, and the fact that the patients were distributed amongst the, at least, 50,000 unvaccinated children in all parts of the Borough, small-pox refused to spread, nor did it "ignite" the large mass of so-called "inflammable material."

There were, indeed, only a few more cases, all told, than the actual number of deaths which were recorded in the epidemic of 1871-73 (when the people were nearly all vaccinated), and only 21 deaths occurred in all.

The Medical Officer of that day (1892-94), himself a "thorough-paced" vaccinator, does not blame the absence of vaccination, but admits that errors of diagnosis were amongst the principal and most potent causes of the spread of the disease. Well might he say so, for, when he enumerates these cases, we find there are not only a number of instances where one, two, or three persons were infected by a wrongly diagnosed case, but also where no fewer than five, six, seven, and even eight persons were stricken down—in each instance through a single medical error. Again, as many as thirteen, and in another instance even seventeen, persons were infected through a mistaken diagnosis.

It is also recorded that three vaccinated cases actually infected eleven, fourteen, and twenty-six other persons respectively, and one revaccinated person conveyed the disease to no fewer than nine

other people. In fact, the enormous proportion of no less than 312 out of a total of 362 cases in the Leicester epidemic of 1892-94 were finally traced to these sources.

This only left 50 cases, and quite that number were accounted for by infection from the Hospital area itself. None of the cases, therefore, could by any possibility be charged against the unvaccinated. Indeed, not a single case of small-pox could be directly traced as due to infection by the unvaccinated during the whole of this epidemic. Consequently, it was the unvaccinated who required "protecting" against infection from the vaccinated and the revaccinated, and especially did they require "protecting" from those medical men whose intimate knowledge of, and strong belief in, vaccination, did not enable them even to recognise small-pox when they saw it.

There was a great pother in the Press, about the fate of Leicester, during the epidemic of 1892-94. It was not only believed, but hoped, that the impending day of doom of the anti-vaccination "Mecca"—so often predicted—had come at last. That terrible word "decimation" was more freely used than it had ever been before.

Dr. Biddle, writing in the "Times," 17th November, 1892, said:—"They trust there to notification, to the exclusion of vaccination—or rather, I should say, 'they trusted'—for small-pox has broken out in their midst, and the vaccinators are beginning to have a brisk time of it, applications being made right and left. "We have all been looking for this, and our only

"hope is that Leicester has prepared a scourge
"for its own back only."

An eminent medical official of the Local Government Board, whose name and fame are not unknown in Leicester, having heard there were 16 cases of small-pox in the town, piously (!) exclaimed, "I wish to God there were 1,600!" Even our own Medical Officer of Health, and others at Leicester, confidently affirmed that at last we were "in for it."

The "Lancet," of 20th January, 1894, followed its usual role in an absurdly extravagant article, headed,

"FATE OF UNVACCINATED CHILDREN AT
LEICESTER."

Commenting on Leicester, towards the close of the outbreak, it observed :—"The price of defiance to vaccination and vaccination laws is being paid heavily at Leicester." . . . It proceeded to ask the Local Government Board not to "connive and become a party by acquiescence," and, amongst other persiflage, used the ominous words, "Coroner" and "manslaughter," and "responsibility" of the Sanitary Committee for "nine deaths among" the unvaccinated children. "If the President of the Local Government Board" failed to act, then, the "Lancet" asked, was it "too much to hope that the Home Secretary will think it a case justifying his interference? Death and disease on such a scale from lead poison or phosphorous would certainly not fail to excite his efforts to find a remedy, and in this case he has

a remedy at hand, and one that is absolutely reliable."

The "Lancet" must have been grossly misinformed as to facts, but, even if its information had been correct, how little this trashy rhodomontade was believed in by leading authorities on the question, may be inferred from the final recommendations of the Royal Commission on Vaccination, which were all in favour of anti-vaccinators.

CHAPTER XL.

SMALL-POX AND FEVERS.

THE age incidence of small-pox and fevers forms another phase of the question equally destructive of pro-vaccinist pretensions. The argument advanced that the diminution of the children's share in the total mortality from small-pox is due to vaccination, and to that alone, is rudely shattered by the facts relating to fevers. In Leicester we have so little small-pox that it is exceedingly difficult to find the requisite material for purposes of comparison. Another difficulty in the same direction has also arisen. The ages are now (1912), and for many years past have been, taken:—"Under 5" and "under 20," instead of "under 5" and "under 15," so that, while the whole of the periods from No. I. to No. VIII. in Table 6 deal with ages "under 5" and "under 15," the remaining periods from, and including, No. IX. deal with ages "under 5" and "under 20." This alteration by the Medical Officers, therefore, tends to lessen the full effect of the very decisive decline, which, notwithstanding this alteration, is still emphatically observable,

TABLE 6.

Being Table 47, Fourth Report, Royal Commission on Vaccination, continued to 1910.

Table showing, for the BOROUGH OF LEICESTER during the years 1849-1910, in quinquennial periods, the total number of deaths, from small-pox and from fevers, of children under 5 and under 15 (or 20) years of age, and of persons at all ages, and the proportion of such deaths under 5 and under 15 (or 20) years, per cent. of the deaths from these diseases at all ages, with the average annual percentage of registered vaccinations to births.*

Period.	Small-Pox.		Fevers : Typhus, Typhoid, and Simple Fevers.		Average Annual Percentage of Registered Vaccinations to Total Births
	Under 5 years.	Under 15 years.	Under 5 years.	Under 15 (or 20) years.	
1849-52 (4 years)	98 —=78·4 125	116 —=92·8 125	85 —=26·4 322	159 —=49·3 322	62·8
1853-57	19 —=65·5 29	22 —=75·8 29	135 —=33·5 403	218 —=54·1 403	80·2
1858-62	37 —=62·7 59	45 —=76·2 59	84 —=33·4 251	150 —=59·7 251	65·9
*1863-67	78 —=62·9 124	100 —=80·6 124	40 —=16·7 239	98 —=41·0 239	76·9
1868-72	118 —=32·8 359	205 —=57·1 359	62 —=21·2 292	144 —=49·3 292	91·7
1873-77	4 —=44·4 9	5 —=55·5 9	40 —=17·3 230	93 —=40·4 230	80·0
1878-82	2 —=25·0 8	4 —=50·0 8	30 —=20·5 146	72 —=49·3 146	66·7

* For the actual number of annual vaccinations and the extra vaccinations, 1863-64, see Table 50.

Period.	Small-Pox.		Fevers: Typhus, Typhoid, and Simple Fever.		Average Annual Percentage of Registered Vaccina- tions to Total Births
	Under 5 years.	Under 15 years.	Under 5 years.	Under 15 (or 20) years.	
1883-87	$\frac{1}{3} = 33\cdot3$	$\frac{2}{3} = 66\cdot6$	$\frac{12}{112} = 10\cdot7$	$\frac{46}{112} = 41\cdot0$	29·9
1888-92	$\frac{2}{6} = 33\cdot3$	$\frac{4}{6} = 66\cdot6$	$\frac{9}{124} = 7\cdot2$	$\frac{62}{124} = 50\cdot0$	3·4
1893-97	$\frac{7}{15} = 46\cdot6$	$\frac{12}{15} = 80\cdot0$	$\frac{17}{190} = 8\cdot9$	$\frac{99}{190} = 52\cdot1$	2·1
1898-02	$\frac{0}{5} = 0\cdot0$	$\frac{0}{5} = 0\cdot0$	$\frac{3}{101} = 3\cdot0$	$\frac{34}{101} = 33\cdot9$	8·2
1903-07	$\frac{5}{25} = 20\cdot0$	$\frac{14}{25} = 56\cdot0$	$\frac{2}{55} = 3\cdot6$	$\frac{20}{55} = 36\cdot4$	23·5
1908-10 (3 years)	$\frac{0}{0} = 0\cdot0$	$\frac{0}{0} = 0\cdot0$	$\frac{1}{23} = 4\cdot3$	$\frac{7}{23} = 30\cdot4$	11·4

FOOTNOTE TO COLUMN 5.—Since 1887 it has been impossible to obtain the figures for deaths from Fevers, under 15 years; and from that date onwards it has, therefore, been necessary to raise the age from “under 15” to “under 20,” which accounts for the rise observable after that date in the second column relating to Fevers.

This subject is further illustrated and confirmed by tables compiled by Mr. Alfred Milnes, M.A., F.S.S., in a most able article, on “Statistics of Small-Pox and Vaccination,” with special reference to age incidence, and published by the Royal Statistical Society in their “Journal,” Vol. LX., Part III. (September, 1897). The following is Mr. Milnes’ Table 16, at page 30:—

TABLE 7.

Children's share of the mortality from small-pox, typhus, and typhoid respectively—corrected for chicken-pox and remittent fever—in quinquennia. Percentage of deaths under 5 to deaths at all ages for four successive quinquennia.

Extracted from the Registrar-General's Annual Reports,
"England: Causes of Death."

	1871-75. Num. Per- bers. centage.	1876-80. Num. Per- bers. centage.	1881-85. Num. Per- bers. centage.	1886-90. Num. Per- bers. centage.	*Per- centage Dimin- tion.
Small- Pox	14,929 — = 31·3 47,696	2,938 — = 28·6 10,243	3,002 — = 27·2 11,025	820 — = 35·3 2,320	— 12·7
Typhus	617 — = 6·4 9,517	259 — = 6·1 4,238	106 — = 3·5 3,015	31 — = 3·4 904	— 46·8
Typhoid	7,617 — = 17·4 43,769	5,562 — = 16·0 34,651	3,312 — = 11·2 29,422	2,146 — = 8·4 25,472	— 51·7

Percentage Diminution of Percentage (i.e., decrease per cent. of children's share), comparing First with Fourth Quinquennium.

This table covers a vastly wider field than the Leicester figures provide, and its interest is intensified by giving typhus and typhoid separately. It is singular that while the first three periods show a gradual decline of the children's share of small-pox fatality, from 31.3 per cent. to 27.2 per cent., the last period shows an upward curve, from 27.2 per cent. to 35.3 per cent., or an actual increase from the first to the last period of 12.7 in the percentage share of children's small-pox deaths.

When we turn to the typhus and typhoid

figures, we find a steady and continuous decline in the children's share, through all four periods, in both diseases. Typhus gives a decline of 46.8 per cent., and typhoid of 51.7 per cent. One would like to know how pro-vaccinists account for these remarkable, but interesting, phenomena. These tables destroy another idol of the advocates of the Jennerian fable! They will not, I suppose, argue that vaccination accounts for the decline in the children's share of the death-rate from typhus and typhoid, as well as that from small-pox?

CHAPTER XLI.

ZYMOTIC DISEASES.

THE seven principal zymotic diseases are Small-Pox, Measles, Scarlet Fever, Diphtheria, Whooping Cough, Simple Fevers, and Diarrhœa. Just as there was considerably less small-pox in Leicester when vaccination had been abandoned, so with all these other zymotic diseases. Table 43 (see Appendix) gives, for Leicester, these diseases in quinquennial groups over the long period of more than 70 years. No unprejudiced mind can examine the facts here presented without recognising that, as between the earlier groups of high vaccination years in the table, and the later groups of years—when vaccination had become a merely nominal factor—some exciting cause must have produced the high mortality so very noticeable in the earlier periods. If vaccination was not that cause, it is for the advocates of vaccination to cite another. This they will find to be a somewhat difficult, if not an impossible, task. Also, they might suggest what accounts for the enormous decline in the death-rate if it is not the abandonment of vaccination, coupled with the increased activity of our Sanitary authorities.

Table 43 and Diagram H (see Appendix) show with almost unvarying regularity the rise and fall of the death-rate to synchronise with the amount of

vaccination. Indeed, the zymotic death-rate was already falling when the more stringent enforcement of vaccination, in and about 1864, apparently caused a substantial rise in the mortality. It increased from 4,616 per million living in 1858-62 to 5,210 in 1863-67, and that at a time when, owing to improving sanitation and conditions of life, there should naturally have been an appreciable and continuous fall.

But it was reserved for the years 1868-72, when vaccination was at its highest point, to accentuate the death-rate from these seven diseases. With vaccinations over 90 per cent. of the births, the zymotic death-rate rose to the enormous figure of 6,852 per million! There is but little vaccination in Leicester now, no small-pox, and the death-rate from these seven principal zymotics has fallen in 1908-10 to the almost incredibly low figure of only 1,153 per million!!! What has achieved this astounding revolution? Certainly not vaccination. It is the direct outcome of active, persistent, and solid progress in sanitation, which, in its broadest sense, covers the entire exclusion of the absolutely insanitary and disease-diffusing practice of cow-poxing.

These figures mean that, when nearly everybody was vaccinated, seven persons in every thousand living in Leicester died from zymotic disease each year, one of the seven being from small-pox. If that rate prevailed in our present population, there would be no fewer than 1,650 persons die each year from these diseases in Leicester, compared with about 280, as is now actually the case. In other words, our improved

sanitation, and rejection of vaccination, are saving nearly 1,400 lives annually from the zymotic group of diseases alone !

CHAPTER XLII.

INCIDENCE OF ZYMOTIC DISEASES.

BEFORE leaving the subject of Zymotic Diseases, a few words may be devoted to the incidence of those diseases, or their relative position to each other. Nothing could show the important change which has taken place in Leicester more significantly than the relative position of small-pox in the group known as the seven principal zymotic diseases.

Notwithstanding the grossly exaggerated statements as to its ravages in former ages, small-pox has never caused more than a relatively small proportion of the zymotic mortality. From this point of view, it has always appeared singular that so much "fuss" should have been made about it, when other sanitarily preventible diseases have produced a very much larger percentage of deaths.

When I gave my evidence before the Royal Commission, I presented a table, as below :—

TABLE 8.

Being Table 17, Royal Commission, Fourth Report.

Table showing, for the BOROUGH OF LEICESTER, for the years 1838-89, the total number of deaths from each of the seven principal zymotic diseases, with the percentage of the deaths from each of those diseases to the total deaths from all of them.

Diseases.	Total Deaths for 52 years (1838-1889).	Relative Percentage of Deaths from each Disease to the Total Deaths from Seven Zymotic Causes.
Small-Pox - - - -	1,081	5·01
Measles - - - -	2,855	13·23
Scarlet Fever - - -	2,987	13·84
Diphtheria - - - -	304	1·41
Whooping Cough - -	2,176	10·08
Fevers - - - -	2,858	13·24
Diarrhoea - - - -	9,319	43·19
Total - - - -	21,580	100·00

I have since prepared a further table, bringing these figures up to date—i.e., for the period of twenty-one years, from 1890 to 1910, inclusive :—

TABLE 9.

Table showing, for the BOROUGH OF LEICESTER, for the years 1890-1910, inclusive, the total number of deaths from each of the seven principal zymotic diseases, with the percentage of the deaths from each of those diseases to the total deaths from all of them.

Diseases.	Total Deaths for 21 years (1890-1910).	Relative Percentage of Deaths from each Disease to the Total Deaths from the Seven Principal Zymotics.
Small-Pox - - - -	51	0·5
Measles - - - -	1,528	15·5
Scarlet Fever - - -	692	7·0
Diphtheria - - - -	1,137	11·5
Whooping Cough - -	1,272	12·9
Fevers - - - -	451	4·6
Diarrhoea - - - -	4,734	48·0
Total - - - -	9,865	100·0

In the first of these tables, the proportion of small-pox is 5.01 per cent. of the whole number of deaths, and in the second table it only represents 0.5 per cent. Another notable factor in these tables is the relative position of fevers, being 13.24 per cent. in the first table, and only 4.6 per cent. in the second. Now, next to small-pox, the collective group, under the name of fevers, would be most likely to be influenced by vaccination, and, in inverse ratio, by sanitation. When we place these figures side by side with the vaccination rate, we get a most remarkable and indicative object-lesson:—

TABLE 10.

Period.	Small-Pox.			Fevers.			Average Annual Percent- age of Vaccina- tions to Births during the whole Period.
	No. of Deaths.	Relative Percent- age to the Seven Principal Zymotic Diseases.	Average Annual Death- Rate per Million Living.	No. of Deaths	Relative Percent- age to the Seven Principal Zymotic Diseases	Average Annual Death- Rate per Million Living.	
1838 - 1889 (inclusive, 52 years) -	1,081	5.01	304	2,858	13.24	798	74
1890 - 1910 (inclusive, 21 years) -	51	0.5	12	451	4.6	109	30

The figures in this table need little or no comment. They give their own emphatic testimony with no uncertain sound.

The fall in both these diseases, being concurrent with the decline in vaccination, is most

indicative. The decrease in small-pox is 93.4 per cent. ; in fevers, 58.6 per cent. ; and in vaccination, 40.5 per cent.

It will be seen that small-pox has now become a negligible factor, whilst fevers have diminished to such an extent that they are second lowest on the list, being only 4.6 per cent. of the whole group. With the increased share borne by diphtheria, I will deal later on.

The incidence of small-pox in zymotic diseases, therefore, falls into line with all the other Leicester evidence in proving that with less vaccination we have had less small-pox.

CHAPTER XLIII.

POCK-MARKED FACES.

WHEN visiting Birmingham and Sheffield, I have often noticed how many persons were pitted with small-pox. How is this, when both are well vaccinated cities? We have very few such cases in Leicester.

Many of my friends in Leicester, in past years, have told me that in their youth almost every other individual whom they met was deeply pitted or disfigured with small-pox, and that this was due to neglect of vaccination. No doubt others have heard similar stories. Indeed, the disappearance of pock-marked faces is one of the favourite arguments in support of vaccination. It is very singular that this claim was actually put forward ninety years ago, when probably not more than five—or at most ten—per cent. of the people were vaccinated.

The annual report of the National Vaccine Establishment for 1822, printed by order of the House of Commons, contains this passage:—

“As a proof of the protecting influence of vaccination, we appeal confidently to all who frequent theatres and crowded assemblies to admit that they do not discover in the rising generation any longer that disfigurement of the

“human face which was obvious everywhere
“some years since.”

Also, in the annual report of the same National Vaccine Establishment, for 1825, we read:—

“What argument more powerful can be urged
“in favour of vaccination than the daily remark
“which the least observant must make, that in
“our churches, our theatres, and in every large
“assemblage of the people, to see a young person
“bearing the marks of small-pox is now of
“extremely rare occurrence?”

Coming down to 1831, we find Dr. Epps, director of the Royal Jennerian Society, writing:—

“Seldom are persons now seen blind from
“small-pox. Seldom is the pitted and disfigured
“face now beheld, but seldom do mankind inquire
“for the cause. It is vaccination. It is vaccina-
“tion which preserves the soft and rounded cheeks
“of innocence, and the still more captivating form
“of female loveliness.”

Now, it must be apparent that if only five or ten per cent. of vaccinations caused the disappearance of pock-marked faces from the whole community ninety years ago, there could not have been many left after fifty years of continuous, compulsory, or universal vaccination. Yet the “Lancet,” of 29th June, 1872, lamented
“the growing frequency with which we meet
“persons in the street disfigured for life with
“the pitting of small-pox. Young men, and,
“still worse, young women, are to be seen daily
“whose comeliness is quite compromised by this
“dreadful disease.”

This was written at a time when the highest known vaccinal "protection" prevailed! Surely this is sufficient to show the claim to be a preposterous, irrational, and complete delusion. The human race is, however, fond of delusions, otherwise so many of them would not bear the charmed life they appear to do. Dr. Johnson was well aware of this predilection when he wrote:—

"I would undertake to write an epic on the story of Robin Hood, and half England, to whom the names and places I should mention are familiar, would believe and declare they had heard it from their earliest years."

Pock-marked faces depend, not upon vaccinal condition, but upon the treatment of the patients, and their occurrence after small-pox is a proof of inefficient medical knowledge and improper nursing, or both combined. The less, therefore, said about the absence of pock-marked faces being due to, and an argument in favour of, vaccination, the better. The facts entirely refute the validity of such a claim.

CHAPTER XLIV.

THE "PROTECTION" THEORY.

MUCH has been said, and written, about the "protection" supposed to be afforded by vaccination, both individually and collectively.

"Protection" has, in fact, taken the place of "vaccination" in the medical vocabulary on this subject.

Like everything else relating to vaccination in the past, "protection" has been shadowy, uncertain, and elusive. Since Jenner proclaimed "protection for ever," and Dr. Epps, in 1831, averred that pock-marked faces had disappeared as the result of only five to ten per cent. of the population being vaccinated, the "protection" period has been a receding and vanishing quantity. It has grown "smaller by degrees and beautifully less."

Modern medical opinion has completely renounced the life-long vaccinal protection, as set up by Jenner and his disciples. Thousands of failures have made that position utterly untenable. Limited "protection" has now replaced the once loudly-vaunted assertion which secured Jenner £30,000 of the public money—in the shape of two grants from Parliament of £10,000 and £20,000. The limit now assigned to the duration of "pro-

tection" from small-pox, assumed to be conferred by vaccination, varies according to individual fancy.

Some doctors affect to believe that protection lasts in a more or less degree for life, others limit it to fifteen, or even only ten, years; but the majority now seldom venture to claim more than a five years' "protection," whilst many reduce the time even much shorter than that.

The Royal Commission, in their conclusions, give a very lame and halting opinion on the "protective" power of vaccination. After their statement that "the question we are now discussing must, of course, be argued on the hypothesis that vaccination affords protection against small-pox," it was inevitable that something should be said on this point. But they are not at all sure, and, indeed, are unable to make any definite statement. All they can say is (page 99, Final Report) :—"We think that the protection it (vaccination) affords against attacks of disease is "greatest during the years immediately succeeding "the operation of vaccination. It is impossible to "fix with precision the length of this period of "highest protection. Though not in all cases the "same, if a period is to be fixed, it might, we "think, be fairly said to cover in general a period "of nine or ten years."

That is all such ardent believers in vaccination could say after several years scientific investigation of a subject upon which their minds were made up and their belief was sure before their investigation began! It would indeed have been

singular if the "protection," supposing it existed at all, had not been greatest immediately after vaccination was first performed. The question is—Did the inquiry strengthen or weaken their original belief in vaccination? If it strengthened it, and that conclusion represented their final belief, then their original faith must have been of a weak and lukewarm character. If, on the other hand, the inquiry weakened their original belief, and that conclusion represented the measure of their faith at the close of the inquiry, their conclusion was a continuously diminishing quantity, and consequently worthless. From Jenner's high pedestal of "life protection" to the "village stocks" (ten years dubious protection) of the Royal Commission is a tremendous drop, the depth of which has only yet been measured by anti-vaccinators.

The appended table affords at one glance the "protected" and "unprotected" numbers of Leicester people at each of the "protection" periods of five, ten, and fifteen years respectively. This table was prepared for the Royal Commission, with the view of ascertaining how the imaginary theory of "protection" worked out in actual practice. It has been continued to the end of 1910.

TABLE 11.

Being Table No. 15, Fourth Report, Royal Commission on Vaccination, continued to 1910.

Table showing, for the BOROUGH OF LEICESTER, during the years 1849-1910, in quinquennial periods, the number of persons registered as vaccinated, with the balance of the population.

Period.	Number and Relative Percentage of the Population "Protected" and "Unprotected," assuming the Protection lasts five years.		Number and Relative Percentage of the Population "Protected" and "Unprotected," assuming the Protection lasts ten years.		Number and Relative Percentage of the Population "Protected" and "Unprotected," assuming the Protection lasts fifteen years.		Population for last year of each Period
	"Protected."	"Unprotected."	"Protected."	"Unprotected."	"Protected."	"Unprotected."	
1849-52 (4 yrs.)	5,782 9.4	55,685 90.6	— —	— —	— —	— —	61,467
1853-57	9,540 14.7	55,579 85.3	15,322 23.5 (9 yrs.)	49,797 77.5 (9 yrs.)	— —	— —	65,119
1858-62	8,241 11.6	62,745 88.4	17,781 25.1	53,205 74.9	23,563 33.2 (14 yrs.)	47,423 66.8 (14 yrs.)	70,986
1863-67	12,212 14.6	71,758 85.4	20,453 24.4	63,517 75.6	29,993 35.7	53,977 64.3	83,970
1868-72	17,728 18.0	80,523 82.0	29,940 30.5	68,311 69.5	38,181 38.9	60,070 61.1	98,251
1873-77	18,062 16.2	93,293 83.8	35,790 32.1	75,565 67.9	48,002 43.1	63,353 56.9	111,355
1878-82	15,927 12.6	110,348 87.4	33,989 26.9	92,286 73.1	51,717 41.0	74,558 59.0	126,275
1883-87	7,156 5.0	135,997 95.0	23,083 16.1	120,070 83.9	41,145 28.7	102,008 71.3	143,153
1888-92	842 0.5	179,708 99.5	7,898 4.4	172,652 95.6	23,925 13.3	156,625 86.7	180,550
1893-97	624 0.3	196,976 99.7	1,466 0.7	196,134 99.3	8,620 4.4	188,980 95.6	197,600
1898-02	2,592 1.2	213,797 98.8	3,207 1.5	213,182 98.5	4,049 1.9	212,340 98.1	216,389
1903-07	6,922 2.9	229,202 97.1	9,490 4.0	226,634 96.0	10,105 4.3	226,019 95.7	236,124
1908-10 (3 yrs. only)	4,049 1.6	244,325 98.4	10,601 4.3	237,773 95.7	11,531 4.6	236,843 95.4	248,374

This table bears out the uniform course of the other facts relating to Leicester, and does not afford many crumbs of comfort to the pro-vaccinist. The highest "protection" for the five years claim was in the fatal small-pox period of 1868-72, when 17,728 persons, or 18 per cent. of the population of Leicester, were "protected," and 80,523, or 82 per cent. of the population, were "unprotected." On the ten and fifteen years claims, the highest "protection" is in 1873-77, but in 1868-72 there was, on the ten years basis, 30.5 per cent. of "protection," and on the fifteen years basis, 38.9 per cent.

In the light of recent recantation of former belief in long period "protection" from small-pox by vaccination, and as even the authoritative Royal Commission only "think" it *may* reach to nine or ten years, anything exceeding five years "protection" may now be disregarded. From 1888 to 1910, the average annual "protection" on a five years basis is shown to be barely one per cent. of the population.

Now, comparing the small-pox epidemic of 1868-72 in Leicester, when the "protection" was 18 per cent. on the professional five years basis, with the epidemics of 1892-94 and 1902-04, when the "protection" was less than one per cent., what do we find? That, reckoning the difference in population, in the first of those epidemics, with eighteen times the amount of vaccinal "protection," Leicester had nearly thirty times as much fatal small-pox as in the second and third epidemics. So much for the highly

vaunted "protection" theory, worked out on a scientific period basis!

Even from the small percentage of vaccinations which are supposed to remain effective on the five years basis, it is necessary to deduct all classed by medical men as "doubtful, "bad," "imperfect," "poor," "indifferent," "moderate," "imperfectly foveated," and the "imperfectly performed" vaccinations. Also, that "imperfect" vaccination which has been described as "in some ways worse than none at all," the "scanty," "unsatisfactory," "very defective," "very inefficient," and that which is "wanting in essential characters." Further, we must deduct that which Dr. Buchanan describes, in the reprinted "Extracts from his Annual Report for 1884," page 15, as "bastard operations," and that which he further describes as a "form of private vaccination that offers itself in competition with public vaccination and which parades its inefficiency as a reason for its acceptance by ignorant people." In addition to this, we have what is styled "semi-efficient" vaccination, and "semi-successful," and vaccination of a "spurious character."

After all the foregoing, further deductions must be made, according to Dr. Ballard, who, in his book on "Vaccination: Its Value and Alleged Dangers," says, at page 93:—"Vaccination is not "a thing to be trifled with, or to be made light "of; it is not to be undertaken thoughtlessly or "without due consideration of the condition of "the patient, his mode of life, and the circum- "stances of season and of place. Surgeon and

"patient should both carry in their minds the
"regulating thought that the one is engaged in
"communicating, the other receiving into his
"system a real disease, as truly a disease as
"small-pox or measles; a disease which, mild
"and gentle as its progress may usually be, yet
"nevertheless now and then, like every other
"exanthematous malady, asserts its character by
"an unusual exhibition of virulence."

Now, no infants, and very few adults, realise this. So, assuming Dr. Ballard's statement to be correct, that, to secure "effective" vaccination, all these conditions must be complied with, then all infantile vaccination, and much of that of persons under adult age, must be eliminated from the sum total of "effective" vaccination. When this is done, and when all the other "spurious" and "very defective" vaccination has also been deducted, the remaining "protection" cannot be very great, and the "protection" theory is reduced to a ludicrous farce.

CHAPTER XLV.

"PROTECTION" BY "MARKS" THEORY.

FOR many years one of the pet theories of the pro-vaccinist was, that vaccinated persons were "protected" from an attack of small-pox in proportion to the number and area of their vaccination marks. Marson brought this idea into prominence, but his own figures—as Dr. W. Scott Tebb, in "A Century of Vaccination," pages 204 and 205, and General Phelps, in the "Chatham News," 8th March, 1902, have shown—as well as the figures of the Leicester epidemic of 1892-94, all refute that contention. Of 207 Leicester small-pox patients in 1892-94, the vaccination marks were distributed thus:—

Number of marks -	1	2	3	4	5	6	7	8	9	10
Number of cases -	8	48	72	51	16	7	3	0	1	1

The remarkable features about these figures are that the patients with six marks and upwards, all of whom would have been revaccinated, are 50 per cent. more than those with only one mark; those with three marks and upwards are nearly three times as numerous as those with only one or two; in fact, those bearing three to ten marks are nearly 75 per cent. of the whole number. Whatever would Jenner have said to that? He believed absolute protection for ever was effected

by one mark only. He, therefore, derided and scorned the very idea of revaccination being necessary at all. Yet the revaccinated small-pox cases numbered 31, or about 15 per cent. of the "protected" class. Five of these revaccinated patients were confluent cases, and one died.

This large proportion of revaccinated cases, with a high number of marks, was a striking point in connection with the 1892-94 outbreak, so much so, in fact, that, adopting Dr. Buchanan's formula in the Sheffield report, if our whole population had been revaccinated and suffered a proportional fatality, it would have given a death-rate of over 32,000 per million.

Jenner was not the only one who disbelieved in and discredited revaccination. Dr. F. Thorpe Porter, M.R.C.S., Superintendent of the Dublin Small-Pox Hospital, says:—"With reference to revaccination, I have no faith in it. Not one of the thirty-six attendants at the South Dublin Union Sheds has taken small-pox. Only seven of the number were revaccinated, and as the remaining twenty-nine enjoy the same immunity, wherein is the necessity of the operation?" ("Medical Press and Circular," 27th March, 1872.)

Our revaccinated army is constantly cited as a proof of the efficacy of a large number of marks, but at page 278 of the Second Report of the Royal Commission, in the evidence of Brigade-Surgeon Nash, we find that "3,953 revaccinated soldiers in the British Army suffered from small-pox from 1860-88, of whom 391 died of the disease." Again adopting Dr. Buchanan's formula, this means a

small-pox death-rate of nearly 99,000 per million among the strongest, healthiest, and specially selected revaccinated adult male population. What a contrast these appalling death-rates of 32,000 and 99,000 per million of the “ efficiently vaccinated ” and “ revaccinated,” or “ doubly protected ” with many marks, afford, compared with the death-rate in the Leicester epidemic under review of only 89 per million amongst our mixed, and, for the most part, “ unprotected ” civilian population !

We may, therefore, well agree with Dr. Porter, and ask, “ Wherein is the necessity of the operation ? ”

If such is the meagre “ protection ” afforded by revaccination, what “ protection ” is there in primary vaccination ? Let Dr. Gayton, one of the principal Government witnesses called to bolster up the practice, answer. He told the Royal Commission, at Questions 1,758-9 :—“ I think primary vaccination is a very fleeting protection indeed. As to the time that primary vaccination lasts, I do not know, but I think it is a very short time. . . . My table shows that it is not absolutely protective up to any age whatever ” !!!

If that did not give away the whole argument for vaccination, it is hard to conceive what would !

The small-pox epidemic, in 1897-98, at Middlesbrough, adds further proof to the absurdity of the “ marks ” protection theory. Dr. Dingle, the Medical Officer of Health, published an article in “ Public Health,” of December, 1898, on the epidemic, and in his Table C he gives the number

of marks of each of the 1,213 vaccinated persons attacked. Singularly enough, this was intended to prove his contention, that much of the bad repute into which vaccination had fallen, was due, as he said, "to the very inefficient manner in which it has been performed in the past. Many medical men seem to think that a vaccination of two small places is quite sufficient protection. This is quite erroneous, and most harmful in practice, as it destroys the belief in the value of vaccination as a protection by reason of those who are thus inefficiently vaccinated contracting small-pox." The doctor could not have sufficiently or seriously studied his own tables, or he would never have written to that effect. His Table C is an overwhelming contradiction of this hypothesis.

In my pamphlet on "Small-Pox at Middlesbrough," I deal fully with the whole subject. It is sufficient for my present purpose to briefly state that nearly half of the 1,213 cases at Middlesbrough had three or four marks, and over 80 per cent. had "good" marks—whatever that may mean.

This theory of "protection" according to the number of marks, is an entire departure from Jenner's original single-mark "protection." But in this, as in all other phases of the vaccination question, there is no unanimity. There are those who advocate one mark, others believe in two, three, four, five, and even six. Dr. Dixon ("Bermondsey and Rotherhithe Advertiser," 14th May, 1881) thinks there should be as many marks as there are in a case of modified small-pox, but omits to state the number. Some pro-vaccinist

experts (!) consider the marks should be small, others large. Some doctors would have them deep, and others large in area. The Royal Commission "think" there should be "three or four marks," with an area of half an inch for each of them. But the Royal Commission assign no rational reason for "thinking" thus. If "protection" is afforded by the number of marks, why stop at three or four? Pro-vaccinists ought to advocate as many as are necessary to secure absolute "protection." The truth is, that the "protection by marks" theory is on a par with all else relating to vaccination. It is a theory only—without any conceivable basis in fact.

CHAPTER XLVI.

THE ROYAL COMMISSION AND THE "MARKS" THEORY.

THE Royal Commission regarded the "marks" theory of "protection as so important that they devoted twenty-seven paragraphs (272-298) of their Final Report to its consideration, and that is why I have alluded to this subject at such length. They start with Dr. Barry's Report for Sheffield. In the first place, they distribute and deal with 825 vaccinated cases treated in Winter Street Hospital. Of these 825 patients 60 died, or a case fatality-rate of 7.27 per cent., being very little less than the fatality-rate of the whole epidemic. They, however, omit 39 cases, with 11 deaths, in which the "records were incomplete." Why did Dr. Barry—whose genius has been so much extolled by pro-vaccinists—include them in this class, and, if he found sufficient reason to so include them, why did the Royal Commission exclude them? Was it because the fatality-rate of these 39 vaccinated cases worked out at 28.2 per cent? What they appear to lose sight of is, that these 864 vaccinated cases, with 71 deaths, are so many proofs of the utter failure of vaccination either to protect from small-pox or mitigate the type of an attack.

Not being able to find much comfort from

Dr. Barry's figures, they turn to Dr. Coupland's statistics for Dewsbury. Here, however, they are worse off. I will quote their own figures, from paragraph 276 :—

“ Of the 461 persons whose marks were recorded,

“ With 4 or more marks 42, of whom 1 died,
or 2.3 per cent.

“ With 3 marks 210, of whom none died.

“ With 2 marks 175, of whom 10 died, or
5.7 per cent.

“ With 1 mark 34, of whom none died.”

So that we find those with one mark are, on their own showing, infinitely better off than those with four. Again, the Royal Commission lose sight of the fact that the 627 vaccinated small-pox cases at Dewsbury (the total number of deaths not being given) furnish 627 indisputable proofs of the failure of vaccination to protect.

From Dewsbury, the Royal Commission turns to Leicester. Of 198 selected vaccinated cases, there are six with one cicatrix, 42 with two cicatrices, 64 with three cicatrices, and 70 with four or more cicatrices; whilst 16 cases are, for some reason, altogether omitted, reducing the number to 182. If these 16 cases had been included, the figures would give about 75 per cent. of cases with three or more cicatrices. The Commission go on to show the severity or mildness of the attack. Even here they do not score much for the benefit derived from vaccination, for those with only one cicatrix show 50 per cent. of mild attacks; those with two cicatrices show 47.6 per cent.; and those with three cicatrices

show 46.6 per cent. Grouping the severer and milder forms, these results are obtained :—

TABLE 12.

Number of Cicatrices.	One.	Two.	Three.	Four, or More.
Confluent and Coherent— per cent. of cases - -	32.2	26.0	23.4	11.3
Discrete and Mild—per cent. of cases - - -	66.6	73.8	76.6	88.5

When we consider that all this elaborate calculation is based on only six cases having one cicatrix, and that two more cases, or an accidental transference of two cases (an error which might easily occur), would bring those with one cicatrix to the level of those with four or more; and, also, when we remember how the Commission detested the very idea of drawing conclusions from small figures, we may reasonably dismiss these from the category of facts worth recording.

What the Commission studiously avoid all through their elaborate tergiversations is the unpalatable, but manifest, deduction that all these vaccinated cases are proofs of the inefficacy of the operation. This is a much more momentous factor than the greater or lesser degree of "protection" in cases where vaccination has entirely failed to "protect." I have already shown that at Leicester, in 1892-94, the vaccinated failures, with from three to ten marks, constituted nearly 75 per cent. of the whole number, and even the revaccinated reached no less than 15 per cent. of the total.

The Commission proceed to deal in a similar

manner with the London and Warrington epidemics, with Dr. Gayton's analysis at the Homerton Hospital, Mr. Sweeting's figures at the Fulham Hospital, and Mr. Marson's exploded calculations.

In reviewing these statistics of over 20,000 cases, they significantly proceed, first of all, to omit the whole of Mr. Marson's figures, and thus reduce the number to 6,839. Next they eliminate Dr. Gayton's cases, because of his untrustworthy methods (Questions 1,704-6, Second Report), and thereby further diminish the number to 4,754 cases. These are thus tabulated:—

1 mark,	828 cases,	with 63 deaths,	or 7.6 per cent.
2 ,,	1,322	,, 93	,, 7.0 ,,
3 ,,	1,479	,, 63	,, 4.2 ,,
4 ,,	1,125	,, 28	,, 2.4* ,,

* Should be 2.5.

Even with these attenuated figures, the Commission observe (paragraph 293):—"There is no doubt some room for error. It may be that the number of scars was, by accident, incorrectly recorded, or even that some which existed had ceased to be apparent."

So that, after casting aside as worthless over 75 per cent. of the 20,000 cases they themselves chose to enumerate, and having specifically selected a number of cases—in which "there is no doubt some room for error"—upon which to base their final result, we then have left 4,754 vaccinated and revaccinated cases, or vaccination failures, with 247 deaths, yielding a case fatality-rate of 5.2 per cent. Compare this with the case fatality-rate of vaccinated and unvaccinated together in

the Leicester epidemic of 1892-94 of 5.8 per cent., and also with the Leicester epidemic of 1902-04, with its case fatality-rate of only 3.49 per cent., or, taking the epidemic of 1904 alone, a case fatality-rate of only 1.24 per cent.! In other words, the case fatality-rate (2.48 per cent.) of the 1,125 cases with four vaccination marks, specially selected by the Royal Commission, was exactly double that of unvaccinated Leicester (1.24 per cent.) in the small-pox epidemic of 1904. Wherein, we may ask, is the benefit of either vaccination or revaccination? How much more serviceable to humanity would it have been, had the Royal Commission devoted half of this futile ingenuity to the important Leicester evidence in favour of sanitation, as compared with and opposed to vaccination!

How oblivious the Royal Commissioners were to the teaching of the figures with which they were dealing is shown in paragraph 295, where they say:—"The particulars given in the Sheffield, Leicester, and London reports afford an indication that the disease varies in its severity inversely as the number of the vaccination marks." How ludicrous all this appears, when compared with the astounding and marvellous achievements Jenner professed to have accomplished with only "one" mark!! And what hypocrisy and mockery it all is, to profess to require marks of deep foveation and large area, when pro-vaccinists know full well that practically no marks worth the name are being produced by present-day operations with the precious glycerinated calf lymph.

The death-blow to the "marks" theory is dealt by the following question and answer:—

On 18th May, 1905, Sir John Rolleston, M.P., asked the President of the Local Government Board—

Whether he is aware that the recently published opinions of Dr. S. Monckton Copeman and of the commissioners appointed by the "Lancet" in 1900 and 1902 to examine the various lymphs on sale in this country, support the view that large marks are not an evidence of efficient vaccination; and that the same authorities have shown that, in consequence of the modern methods of vaccination, it is possible to produce the Board's stipulated area of vesiculation—viz., not less than half a square inch—without leaving anything like a corresponding area of marks; and whether he proposes to take any steps to amend the Board's Vaccination Order of 1898, so as to make it more consistent with the latest medical evidence on these points.

Mr. Gerald Balfour's printed answer was as follows:—

Dr. Copeman informs me that, in his opinion, large scars are not necessarily evidence of efficient vaccination, and small scars are not, in themselves, evidence of inefficient vaccination, but that usually the area of the scar corresponds fairly closely with that of the vesicle which preceded it. These opinions do not, as I am advised, render it necessary or desirable to amend the Vaccination Order, 1898, which does not make the area of the scar a criterion of successful vaccination.

CHAPTER XLVII.

LEICESTER'S INFANTILE DEATH-RATE.

ONE of the most crucial tests of the healthiness of any locality is its infantile death-rate. Leicester, in former times, had an unenviable notoriety in this respect, chiefly owing to the recurring prevalence of summer diarrhœa. The death-rate from this disease—which is principally infantile—was especially emphasised during the high vaccination period, and has fallen enormously as vaccination has declined. This is very clearly shown by my Tables 27 to 39 and Diagrams M and N, pages 445 to 455, Fourth Report, Royal Commission.

The following figures, bringing the statistical proof up to date, are unmistakable in their significance :—

TABLE 13.

Period.	Average Annual Death-Rate of Infants, per 1,000 Births.	Average Annual Death-Rate (all Ages) from Diarrhœa, per 1,000,000 Population.	Average Annual Percentage of Vaccinations to Births.*
1838-42	177·2	1,586	Not known.
1843-47	193·3	1,938	Returns incomplete.
1848-52	210·0	2,201	62·8 (4 years).
1853-57	198·2	2,276	80·2
1858-62	199·6	1,598	65·9
*1863-67	213·0	2,374	76·9
1868-72	238·9	3,161	91·7
1873-77	211·2	2,507	80·0

* For the actual number of annual vaccinations and the extra vaccinations, 1863-64, see Table 50.

TABLE 13.—Continued.

Period.	Average Annual Death-Rate of Infants, per 1,000 Births.	Average Annual Death-Rate (all Ages) from Diarrhœa, per 1,000,000 Population.	Average Annual Percentage of Vaccinations to Births.*
1878-82	197·4	1,991	66·7
1883-87	209·7	1,734	29·9
1888-92	206·5	1,236	3·4
1893-97	196·0	1,627	2·1
1898-02	176·8	1,189	8·2
1903-07	153·0	848	23·5
1908-10 (3 years).	127·6	405	11·4

From Table 13 it will be seen how, as official pressure became more intense to secure the vaccination of infants, so the death-rate from diarrhœa increased. In the four periods when the percentage of vaccinations to births exceeded 75 per cent., the death-rate from diarrhœa was considerably over 2,000 per million, while in the one fateful period when the vaccinations were forced up to over 90 per cent. of births, the diarrhœa death-rate was actually over 3,000 per million! Contrast that with the six latest periods giving a lower percentage of vaccinations, being less than 30 per cent. of the births. The highest of these periods gives a diarrhœal death-rate of only 1,734 per million, and the lowest only 405 per million. Even here, in this last comparison, the highest death-rate is found side by side with the highest vaccination rate. Perhaps it may be objected that it is unfair to take the death-rate of the last period, which is incomplete, being only three years, as the remaining two years might effect a material alteration. For my part, I am quite

content to compare the last complete period—viz., 1903-07—with its diarrhœal death-rate of only 848 per million, and a vaccination percentage of 23.5, against 1868-72, with its diarrhœal death-rate of 3,161 per million, and a vaccination percentage of 91.7. These show that with about four times the amount of vaccination, we had about four times the number of deaths from diarrhœa.

How far this awful fatality from diarrhœa increased our infantile mortality may be seen from the figures in Table ¹³~~15~~. For the eight years, 1868-75, when vaccination was not only rigorously enforced, but kept at over 80 per cent. of the births, the death-rate from diarrhœa reached an annual average of over 3,000 per million.

Exactly twenty years later, with more, and better, sanitation, and less vaccination, for the eight years, 1888-95, when the vaccinations averaged only 3.1 per cent. of the births, the death-rate from diarrhœa had fallen to an annual average of only 1,397 per million. These figures tell so striking a story that they are worth even more vividly depicting side by side :—

TABLE 14.

Periods.	Average Annual Percentage of Vaccinations to Total Births.	Average Annual Death-Rate per 1,000,000 living, from Diarrhœa.
1868-75	88.8	3,052
1888-95	3.1	1,397
	<hr/> Difference, 85.7	<hr/> Saving per annum, 1,655

This is a most important transformation in the death-rate. If it is contended by pro-vaccinists that the result is due to sanitation, and not to

vaccination, well and good! This would "give away" the whole case for vaccination. If sanitation so far influences the effect of one zymotic disease, why not of all, even including small-pox?

I do not, for one moment, contend that vaccination has been the sole cause of increased infantile mortality; but I do most emphatically maintain that when vaccination was enforced upon very young infants, it was one of the principal agents contributing to "the Massacre of the Innocents." The proofs are in the figures, which set out indisputable facts. There are, of course, numerous contributory causes to a death-rate, but that vaccination is one, and at tender ages one of the most powerful, should be realised by pro-vaccinists and anti-vaccinists alike. It is sufficient proof to know that the Local Government Board—who admit little or nothing that tells against vaccination—have so far acknowledged this, that when diarrrhœa or erysipelas are prevalent in a district, they recommend the suspension of public vaccinations.

The fall in the death-rate from diarrrhœa means to Leicester an annual saving of not less than 630 lives—a not inconsiderable number. There is one point in Table ~~4~~⁴ which opponents might assume I wished not to refer to. It is that the two last periods show an increase of vaccinations and a decrease in the diarrrhœal death-rate. I am very glad to deal with this, because it so happens that it emphasises all that has gone before.

The increased vaccination was largely due to the furore worked up by interested persons, on

the importation of vaccinated small-pox cases, in 1902. I need only give one instance to show that the increase was unreal and abnormal, and was not (in any sense) due to a natural return to vaccination.

The Medical Officer of Health, in a paper on the "Leicester Method," etc., published in "Public Health," for July, 1904, page 628, speaking of his belief in the "temporary protection" of vaccination against small-pox, says that he induced nearly 800 persons to submit to vaccination, but found it "a heavy and thankless task." Now, this artificial "forcing" of vaccination accounts very largely for the increased percentage of vaccinations in the period 1903-07, but it must be remembered that these included many persons of adult age.

The enormously decreased death-rate from diarrhoea was undoubtedly due to three principal causes—(1) The comparatively small amount of vaccination, compared with 1868-72 and following years; (2) the greatly improved sanitary conditions in the town; and (3) the improved physical stamina and virility of unvaccinated parents, who are now contributing a considerable quota of the total births. Whatever advantage our opponents imagine they can extract from this part of Table ~~94~~ ⁹⁴, they are perfectly welcome to. For myself, I am content with the vindication of our anti-vaccination principles, as shown by the saving of 630 lives annually.

CHAPTER XLVIII.

SAVING THE CHILDREN'S LIVES.

Now, what is the logical and actual outcome of the teaching of the figures just considered? We know that one of the principal claims put forward in favour of vaccination has been that it not only saves the children from a loathsome, disfiguring disease, but that it also saves many of them from a premature death by small-pox. If there was any truth in these claims, it would be unwise to the last degree not to pay earnest heed to them. Indeed, it does credit to human nature to know that such feelings of sympathy have prompted, in no small measure, the support given to the practice of vaccination. Unfortunately for those who believe in, and press, these claims, experience not only shows their utter fallacy and complete failure, but it proves exactly the opposite result.

We have only to examine Table 49, and Diagram J, illustrating this table (see Appendix), to see this most clearly.

This diagram shows—(1) That the decline of the mortality at all ages (which had set in with the introduction of sanitary measures in the earlier periods 1848-62) was checked, and that the mortality rapidly rises (particularly in the younger ages) concurrently with the increased enforcement of vaccination.

(2) That the highest death-rate of children under 5, under 10, and under 15 years (up to which ages more especially it has been assumed that vaccination saves life) was coincident with the highest rate of infantile vaccination, 1868-72.

(3) That the above-mentioned increase of mortality under 5, 10, and 15 years (the death-rates above 15 meanwhile declining) raised the all-age and all-cause death-rate to the highest point (1868-72) attained during a period of forty years from 1849, when vaccination became more generally practised in Leicester.

(4) That a notable and continuous decline in the mortality of children, more particularly in the younger ages under 5 years, with a proportionate decline under the ages of 10 and 15 years, coincides with the rapid fall and general abandonment of vaccination.

(5) That Leicester (which was formerly classed by the Registrar-General amongst the most unhealthy towns of the country) had an average annual death-rate in 1868-72 of 26.82 per 1,000 total population, when the percentage of vaccinations was 91.7 to the total births; and that subsequently, when vaccinations had fallen to 2.1 per cent. to the total births, the average annual death-rate from all causes for 1893-97 had fallen to only 17.31 per 1,000 living, and has since gone down to 12.30. (This is a remarkably low death-rate for a manufacturing town like Leicester, especially considering its geology and geographical position. It is now, therefore, grouped by the Registrar-General with towns having the lowest rate of mortality.)

The lesson of this table⁽⁴⁹⁾ is that when we pinned our faith to the prophylactic and saving virtues of vaccination—from 1868 to 1872—no fewer than an annual average of 239 out of every 1,000 infants born died within twelve months of their birth. Now, having seen the error of our ways, and discarded the nostrum, instead of 239 deaths, there is only an annual average of 128 deaths per 1,000 births, or a decrease of 111 per thousand, being a saving of 46 per cent. These figures represent an annual saving of over 600 infant lives each year in Leicester.

In other words, instead of 1,315 infants dying within twelve months of their birth each year, as in 1868-72, there are now only 702 such deaths. Even these are too many, but, fortunately, the trend is still in the right direction.

The saving of children's lives under five years of age is on the same lines of progress. Whereas in the high vaccination period of 1868-72 there were 107 deaths per thousand living at that age, now there are only 34 per thousand, being a decrease of 73 per thousand, or a saving of 68 per cent. This represents a saving of over 2,200 lives each year of children living under five.

In other words, if the death-rate under this heading had continued as in 1868-72, no less than 3,109 children under five years of age would have died within each year, instead of only 890. These remarkable results show us where the saving of life has been effected by our sanitary work, minus vaccination.

The preservation of life under 15 is equally

remarkable, but as this age is now merged in that of twenty years, which is practically an adult age, it is unnecessary to deal with it in this chapter. I, therefore, relegate it to that on the general death-rate of Leicester.

CHAPTER XLIX.

THE GENERAL DEATH-RATE OF LEICESTER.

WE may now merge the details of the several tables already given into the general death-rate, or, more correctly, the death-rate of Leicester from all causes and at all ages. These results are equally as significant as those of a more detailed character. From 1868 to 1872, when the percentage of vaccination reached high-water mark, the average annual death-rate of Leicester was 27 per thousand of the population per annum, or nearly five per thousand above the annual average death-rate of England and Wales.

Had the death-rate of Leicester continued in 1908-10 at the same alarming figure as in the high vaccination period of 1868-72, the deaths each year would have reached an annual average of about 6,400, instead of being only 3,026, and thus showing an annual saving of nearly 3,400 lives.

Fortunately, owing to its sanitary advancement, the death-rate of Leicester in 1908-10 was nearly two per thousand below that of England and Wales, or a gain on the death-rate of the whole country, as compared with 1868-72, of exactly 6.4 per thousand. Had the death-rate of Leicester even only remained in the same relative position to England and Wales as in 1868-72, there would have been, in each of the three years named, about 2,540 more deaths than actually occurred. In other words, instead of an average annual death-rate of 3,026, there would have been no less

than 5,560 deaths in each of these years. On this basis an annual saving of 2,534 lives has resulted. Whether we take the annual saving at nearly 3,400 lives, or over 2,500, it is an achievement to be proud of, and proves the enormous benefits Leicester has derived from its progressive sanitary policy and work.

TABLE 15. (See Diagram B.)

Being Table 24, Royal Commission, Fourth Report, abbreviated by omitting the actual numbers, but continued to 1910.

Table showing, for the BOROUGH OF LEICESTER during the years 1838-1910, in quinquennial periods, the average annual rate per 1,000 living of persons married, of births, and of deaths; with the average annual registered vaccinations per 100,000 living.*

Periods.	Rate per 1,000 Population.			Estimated Population for the middle of the Period.	Average Annual Registered Vaccinations per 100,000 Population.
	Persons Married.	Births.	Deaths.		
1838-42	20·58	38·96	28·09	49,951	Not known.
1843-47	21·24	38·51	27·46	54,737	Returns incomplete.
1848-52	22·10	37·61	26·51	59,788	2,398 (4 years.)
1853-57	20·62	37·35	24·88	63,624	3,008
1858-62	20·30	37·15	24·48	67,456	2,434
*1863-67	24·78	41·15	25·97	78,516	*3,175
1868-72	22·38	41·60	26·82	92,873	3,819
1873-77	22·22	42·69	24·49	105,913	3,401
1878-82	19·22	39·74	22·17	120,059	2,645
1883-87	17·28	35·15	19·88	136,147	1,059
1888-92	16·79	32·12	18·34	161,911	108
1893-97	16·67	31·91	17·31	190,690	65
1898-02	17·20	29·82	16·75	208,627	241
1903-07	16·03	25·70	13·78	228,165	612
1908-10 (3 years)	14·98	22·51	12·39	244,267	257

* For the actual number of annual vaccinations and the extra vaccinations for 1863-64, see Table 50.

DIAGRAM B.

ILLUSTRATING TABLE 15.

LEICESTER.

MARRIAGES, BIRTHS, AND DEATHS.

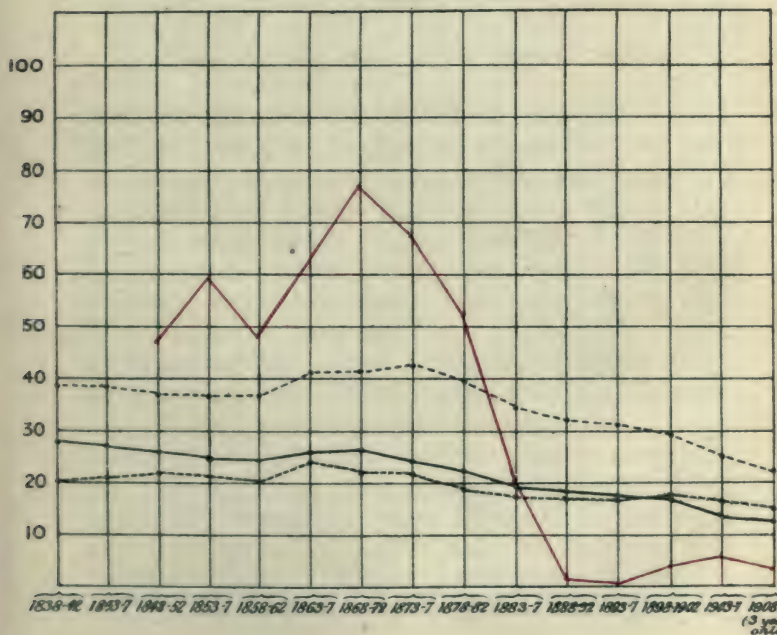
PER 1000 POPULATION, 1838-1910.

Upper Dotted Curve—Average annual birth-rate per 1000 population.

Solid Black Curve—Average annual death-rate from all causes per 1000 population.

Lower Dotted Curve—Average annual number of persons married per 1000 population.

Red Curve—Average annual vaccinations per 100,000 population.
(One-fiftieth only shown to suit compass of diagram.)



(3 years only shown)

PART V.

STATISTICAL COMPARISONS WITH LEICESTER.

CHAPTER L.

LEICESTER COMPARED WITH OTHER TOWNS.

WHY should medical gentlemen and influential medical organs be so anxious about Leicester on the appearance of small-pox? Have they forgotten the impressive lessons of other towns which are so well vaccinated? In the epidemic of 1871-73, in Leicester, when nearly the whole of the children were vaccinated, no fewer than 193 deaths occurred from small-pox of children under 10 years of age. Let opponents compare this terrible death roll with the total of only 13 deaths of children under 10 years during the whole epidemic of 1892-94, which so greatly exercised the "Lancet" and other medical authorities, and when the average of vaccinations to births was less than three per cent. Also, let it never be forgotten that in efficiently vaccinated Sheffield, during the notorious and terrible epidemic of

248 LEICESTER COMPARED WITH OTHER TOWNS.

1887-88, no fewer than 339 of the cases were children under 10 years, each having three or more vaccination cicatrices, of whom 14 died.

The "British Medical Journal," of 21st April, 1894, gives some particulars of small-pox outbreaks, which the critics of Leicester—if their vision is not too obscured by prejudice—might study with much advantage to themselves. Although for some of the towns the whole of the cases are not included, and, in some instances, the epidemic spreads over more than one year, the manifest deduction is not affected. The only town approaching Leicester for a low small-pox fatality-rate is the salubrious, sparsely populated, and residential suburban district of Aston Manor.

TABLE 16.

Towns.	Small-Pox Cases.	Small-Pox Deaths.	Fatality per cent.
Aston Manor . .	113	6	5.3
Birmingham . .	1,203	96	8.0
Brighouse . . .	134	15	11.2
Glasgow	279	23	8.2
Halifax	513	44	8.5
Leicester	366	21	5.7
Liverpool	194	15	7.7
Manchester . . .	406	27	6.7
Salford	173	22	12.7
St. Albans . . .	58	6	10.4
Warrington . . .	598	60	10.0
	4,037	335	Average 7.4 8.3.

From this table of eleven towns, including Leicester, chosen by the "British Medical Journal," we find the average fatality-rate to be ~~8.2~~ ^{8.3} per cent., while that of Leicester is only 5.7 per cent.

These figures show a gain to Leicester of ~~4.9~~^{3.6} per cent., but if we calculate the relative difference between the death-rate of 5.7 per cent. and that of ~~7.6~~^{8.8}, they mean a percentage gain to Leicester of nearly ~~24~~³² per cent. We may ask the "British Medical Journal" wherein is the benefit of vaccination?

It would be much more dignified for those people who constantly revile Leicester to remove the beam from their own eye. It would then enable them to see clearly that Leicester has set both them and the whole country a bright and illustrious example, which they might do worse than follow.

CHAPTER LI.

LEICESTER COMPARED WITH LONDON.

LONDON has very little vaccination default, and, as the organisation under the Metropolitan Asylums Board is the largest of its kind in the world, and its resources (both financially and otherwise) are second to none, it cannot be considered inappropriate or unfair to compare it with Leicester. Whatever difference may exist should rather tell against Leicester than in its favour.

The small-pox epidemic in London, in 1901-02, came after several years of comparative freedom from the disease. The usual laudations of the beneficent effects of vaccine prophylaxy were well to the fore, but, as on many previous occasions, the "protection" failed when the trial came, and before 1901 had closed, there were 1,743 cases and 257 deaths.

On 10th January, 1902, the Metropolitan Asylums Board issued a special report of its Statistical Committee, on "Small-Pox and Vaccination," during the epidemic in London in 1901. That outbreak was considered to be so very favourable to vaccination they could not resist the temptation, and the Committee unduly hastened to place before the public the results (as they called them) to the end of the year 1901, although

at that time the epidemic was not over, nor were the results complete. The first paragraph of this report reads as follows :—

“Instead of waiting until the issue some months hence of our usual annual report on the statistics obtainable from the whole of the Board’s various institutions, we take the earliest opportunity of submitting this special report upon the statistics concerning small-pox in the Metropolis during the year 1901. In doing this, we believe we are meeting the wishes of the Managers and the public. It must be understood that this document is in the nature of an interim report, and is not in substitution for the later and fuller one.”

What a philanthropic object! I do not suppose the public had any feeling in the matter of publication, and I should imagine the Managers themselves now wish this report had never been issued. Apart from age sub-divisions, the main feature of the report is to classify the cases as :—(1) “Vaccinated,” (2) “Unvaccinated,” (3) “Doubtful.” The table gives 760 vaccinated cases with 108 deaths, a case fatality-rate of 14.21 per cent.; 194 unvaccinated cases with 98 deaths, a case fatality-rate of 50.52 per cent.; and 63 doubtful cases with 41 deaths, a case fatality-rate of 65.08 per cent. So, according to the showing of these extremely astute statisticians, the chances of recovering from small-pox were far greater if the patient was really and indisputably unvaccinated, than if there was some doubt as to whether the operation had been undergone or not! What a remarkably powerful argument in favour

of vaccination, to be sure!! Does it not, in reality, show up conclusively the shallowness of the whole Jennerian case?

In all, the report only deals with 1,017 cases and 247 deaths, yielding an over-all case fatality-rate of 24.29 per cent. It is not my intention now to gibbet the numerous fallacies underlying the whole report, as I did this in an article at the time it was issued. I wish to deal with the broad statistical features of the whole outbreak, and not a part of it only. We can then compare them with pre-vaccination and post-vaccination times, and also with Leicester.

The first point that the table affords, is undeniable evidence that vaccination does not protect from small-pox, as testified by the 760 vaccinated cases. It also failed to modify the attack, as proved by the 108 deaths amongst the vaccinated.

The second point that pro-vaccinists should remember is that *all* doubtful cases are vaccinated—that is, there is *prima facie* evidence of some vaccination—beyond all doubt, otherwise they would at once be classed as unvaccinated. The effect of this consideration is that the vaccinated and doubtful together give 823 cases, with 149 deaths, or a case fatality-rate raised to 18.1 per cent.

The third point is, that at least seven vaccinated infants—all of whom died—recorded in the Registrar-General's returns as vaccinated, are either included by the Statistical Committee of the Metropolitan Asylums Board in the unvac-

inated cases, without one word of explanation, or are omitted altogether. These, at least, if not others, should be transferred to the vaccinated class. This brings the case fatality-rate of the vaccinated to 18.7 per cent., and reduces the case fatality-rate of the unvaccinated accordingly.

Even assuming their figures are correct, it is for our opponents to tell us how it happens that the unvaccinated case fatality-rate in well-vaccinated London is over 48 per cent., while at unvaccinated Leicester, according to the reports of the Medical Officer of Health for 1902-04, the fatality-rate of the unvaccinated is only 4.87—a difference of 43.52 per cent. in favour of Leicester. Perhaps they will kindly explain how this difference arises!

Volume I. of the Annual Report of the Metropolitan Asylums Board, for 1901, contains some curious examples of logic, especially when we remember that the writers are full-fledged believers in vaccination as a preventive of small-pox. On page 136 we read:—

“We alluded in our Annual Report for 1900
“to the erratic behaviour of small-pox. . . .
“In reporting to the Board on the subject, we
“said (5th October):—

“‘The outbreak of small-pox with which the
“‘Board have to deal at this moment has come
“‘at a time when it might reasonably have
“‘been expected least. We are in the middle of
“‘the seasonal rise of fever and diphtheria, and
“‘never before in the history of the Board has
“‘such an outbreak of small-pox commenced in

“the midst of that period. The rise in fever and diphtheria admissions has, as a general rule, coincided with the lowest point touched by small-pox.”

From this it would appear that small-pox was not expected, and when it came, would be erratic and beyond control. But, if we turn to another part of the report, at pages 8 and 9, Vol. I., 1901, we read :—

“The work of the Board as the infectious hospital authority for London claims the largest share of their attention, and during the year 1901 special importance has been given to this branch of the work by the outbreak of small-pox in the autumn.

“For some little time past an outbreak of some dimensions had been more or less confidently predicted. Some authorities held that with the widespread disregard of vaccination and the consequently increasing number of susceptible persons in the huge population of London, a serious epidemic must sooner or later occur should the disease succeed in invading and taking root amongst the people. Others pointed to the fact that epidemics have hitherto recurred in something like uniform cycles, and that, looking to the history of small-pox in the past, another outburst might be expected about this time.

“Dr. Ricketts, the Medical Superintendent of the Hospital Ships, in his annual report for the year 1898, after quoting the numbers of small-pox cases for a series of years, says :—

“ I think these facts justify the expectation
 “ that in the next few years small-pox will be
 “ more rife in London than it has been recently ;
 “ and if past experience is to be a guide in
 “ preparing for the future, they suggest that the
 “ Managers should be prepared to deal with a
 “ considerable visitation of small-pox in three
 “ years’ time or earlier.

“ In August, the appearance of cases in various
 “ parts of London gave reality to these fears, and
 “ it soon became apparent that there were in the
 “ Metropolis the seeds of what might prove a
 “ serious outbreak, the daily returns indicating
 “ upwards of twenty different centres of infection.
 “ The progress of an epidemic of small-pox can
 “ never be foretold with any approach to accuracy.
 “ This will be readily appreciated when it is
 “ considered that a single person in an infective
 “ condition, but in whom the disease has not yet
 “ been recognised as small-pox, may move about
 “ freely amongst a large number of his fellows,
 “ and quite unconsciously and innocently spread
 “ the disease broadcast, and that this same pro-
 “ cess might be happening in a dozen or more
 “ different parts of London at the same time.”

These extracts prove that an epidemic was not only due, but expected, especially as the disease was still to come in cycles, as of yore. In the light of these statements, what becomes of the boasted protection alleged to be conferred by vaccination ?

The chairman of the Hospitals Committee was on more solid ground when he submitted a

memorandum on the small-pox outlook, and said, page 137 :—

“ ‘ Stress is often laid on the improved general
“ ‘ and sanitary condition of the population and
“ ‘ on the vigilance and efficiency of the Health
“ ‘ Officers of the Metropolis as materially curtail-
“ ‘ ing the risk of extended epidemic. Admitting
“ ‘ to the full the force of these considerations, I
“ ‘ would remind the Committee that all the exer-
“ ‘ tions of the local authorities in dealing with
“ ‘ small-pox must avail nothing, and their best
“ ‘ precautions must be futile, in the absence of
“ ‘ sufficient isolation accommodation.’ ”

The Board complain of the criticism by anti-vaccinators of their preliminary report. On page 12, Vol. I., 1901, they write :—

“ ‘ The occurrence of a small-pox epidemic not
“ ‘ unnaturally gave rise to a certain amount of
“ ‘ alarm amongst the population generally, and it
“ ‘ was evident on all hands that recourse was being
“ ‘ had, in a very large measure, to vaccination and
“ ‘ revaccination, and, as might have been expected,
“ ‘ the vaccination controversy itself gained a cer-
“ ‘ tain amount of new life. The Board, believing
“ ‘ most thoroughly in the protective powers of
“ ‘ vaccination and revaccination with their experi-
“ ‘ ence of its value in the case of their own staff,
“ ‘ and feeling that the public would be glad to
“ ‘ be furnished at the earliest possible date with
“ ‘ statistics concerning the cases actually treated
“ ‘ during this outbreak, published a report soon
“ ‘ after the close of the year dealing with 1,017
“ ‘ cases treated to completion (i.e., to death or

discharge on recovery) during the year 1901.
 These figures are very striking, and prove conclusively—as, indeed, has often been proved before—that efficient vaccination is for a number of years a protection against small-pox, and that where it ceases to be an actual protection it very materially modifies the character and effects of the disease. These statistics are more fully dealt with in the statistical volume which accompanies this report. The Board do not exist to promote or to oppose vaccination, but when they have a large amount of statistical information which they believe to be of value on a subject concerning the health of the community, they think it right that they should publish such information. Yet the issue of these statistics in January, 1902, was assailed by anti-vaccinationists, and the accuracy of the figures, and even the *bona fides* of the Board's officers in compiling them, were impugned."

On page 136 of the same report (Vol. I., of 1901) there appears:—

"No history of permanent value can be compiled of the present small-pox epidemic until its final abatement."

Then why, if their object was not to promote vaccination, did they hasten to issue the erroneous report referred to? Why did they allow the valuable time of their staff, and a considerable proportion of their annual reports, to be occupied with useless vaccination details? If this was not intended to promote vaccination, it is difficult to divine the cause. They must not object to

criticism while they stoop to these practices. It would have been much more dignified to have waited until the outbreak ended, and then have given a complete report on the whole of the cases and deaths. Their simulated indignation at the impugning of the wonderful illusory statistics which brought about a "vaccination epidemic" in London, and put fabulous sums into the pockets of members of the medical profession in the shape of vaccination fees, may be estimated at its true worth when we consider that the unreliability of the classification was indisputably demonstrated by the official records of the Registrar-General himself. The Board may think that they ought to enjoy the unquestioned confidence of the public, but, with their vast experience of the manner in which vaccination has always been bolstered up, it cannot be wondered at that anti-vaccinators accepted the interim report of the Board *cum grano salis*.

Owing to the difficulty I experienced in endeavouring to ascertain the vaccinal condition of the patients in hospital, during my investigation of the small-pox epidemic at Middlesbrough, 1897-98, I suggested to Mr. Alex. M'Arthur, M.P. for Leicester, the desirability of obtaining legal authority for inspecting the registers of cases treated in small-pox hospitals. Mr. M'Arthur thereupon secured the insertion of Section 8 in the Vaccination Act of 1898, which grants facilities for such inspection to be carried out.

When application was made, under this Section, during the London epidemic of 1901-02, by the National Anti-Vaccination League, to the Metro-

politan Asylums Board, they set the Act at defiance, and refused permission to examine their registers. The question was raised in Parliament, but, in the end, they shuffled out of their legal obligation on the plea that the Metropolitan Asylums Board is not a "sanitary authority" (as specified by the Act)—a mere quibble of words.

So the Metropolitan Asylums Board not only issued premature and inaccurate small-pox statistics—which appear to the uninitiated to favour vaccination—but, by refusing to allow inspection of their registers, they actually became law-breakers, and thus defeated the object Parliament had in view. The less, therefore, they profess that it is no part of their function either "to promote or to oppose vaccination," the better for their reputation—should they desire to pose as disinterested and fair. If the vaccinal condition of the patients (as entered in the official registers) is a truthful record, the Metropolitan Asylums Board ought rather to court inquiry than to burke it, no matter whether an Act of Parliament has been passed for their guidance or not. Secrecy can only excite suspicion.

In addition to the inaccurate and premature special report on small-pox already alluded to, the careless manner in which the statistics of the Metropolitan Asylums Board are prepared and perpetuated, is further exemplified in Table 22, on page 175 of their report for 1902. In this table the small-pox fatality-rate is given as 18.51, whereas it should be only 14.74, while that for 1902 is set out as being 16.60, and should be

16.89. In the summary of "Statistical Items," issued annually, the small-pox fatality-rate for 1901-02 is given as 16.8 per cent., although the rate was only 16.5. The following table shows these errors :—

TABLE 17.

Year.		Small-Pox. Cases. Deaths.		Fatality-Rate per cent. M.A.B. Corrected.	
Small-pox admissions and deaths, page 175, M.A.B. Report for 1902	1901	1,743	257	18.51	14.74
	1902	7,916	1,337	16.60	16.89
Totals, 1901-02		9,659	1,594	16.80	16.50
Small-pox admissions and deaths, Dec. 1, 1870-1902		71,804	11,869	16.53	16.53

These blunders are continued to, and appear in the report for 1910. Evidently accuracy does not count as one of the strong points of the Statistical Committee of the Metropolitan Asylums Board. Otherwise, they would have corrected these erroneous figures long ago—a much more laudable work than the issuing of misleading reports. At page 16, Vol. I., Report for 1901, we are told that the epidemic severely tested and imposed a great strain on all their resources—land, river, and ambulance services, as well as hospital accommodation. One might almost be led to surmise that the Statistical Department felt the effects of the pressure also! It will be seen from the above table, that when we come to the rock bottom of all the cases, and all the deaths, there is no improvement in the fatality-rate since pre-vaccination times. This point is still further emphasised by the totals of small-pox in London, from 1st December, 1870, to 31st December, 1902, which are added at the bottom of the table.

CHAPTER LII.

COMPREHENSIVE COMPARISONS WITH LEICESTER.

THE late Mr. Alexander Wheeler, of Darlington, in his comprehensive evidence before the Royal Commission, presented a table of pre-Jennerian death-rates from small-pox, this being printed as Table J, on page 201 of the Royal Commission on Vaccination, Third Report. It deals with the years 1746 to 1779, and its totals are as follows :—

TABLE 18.

Cases.	Deaths.	Percentage of Deaths to Cases.
27,444	5,165	18·8

This is followed by Table K (page 203), which gives the post-Jennerian small-pox fatality from 1802 to 1885, and of which I also give the totals only :—

TABLE 19.

Countries.	Cases.	Deaths.	Vaccinated.	Fatality per cent.
England, Scotland, and Ireland	86,414	12,730	62,887	14·7
Continental	34,873	4,383	15,981	12·5
American	9,670	2,599	2,637	26·8
Totals	130,957	19,712	81,505	Av. 15·0

The above tables show a saving in fatality of only 3·8 per cent. between pre-Jennerian and post-Jennerian small-pox. But from what we

now know of the effective influence of sanitation on zymotic diseases, the improved sanitation and conditions of life, ought, and would account for much more than this difference of only 3.8 per cent.

In addition to the foregoing figures, Mr. Wheeler presented Table M to the Royal Commission (Third Report, page 204). This table is by Dr. Proust, "Report on Vaccination" (1889, page 45), and gives 133,894 cases and 22,102 small-pox deaths in France. Tissott, the famous Swiss authority, gives pre-vaccination small-pox fatality as one in seven, or $14\frac{2}{3}$ per cent.; Heberden gives one in six, or $16\frac{2}{3}$ per cent.; whilst A. de Haen, of Vienna, gives 14.2 to 20 per cent., or, taking these authorities together, we get a case fatality-rate of about 16.5 per cent. Thus we are now in a position to make an exacting comparison of a colossal character with Leicester.

TABLE 20.

Period.	Conditions.	Small-Pox Cases.	Small-Pox Deaths.	Small-Pox Fatality per cent.
Eighteenth century (1746-79); all unvaccinated. Mr. Wheeler's Table J, p. 201, R. C. V., Third Report.	Before vaccination; small-pox increased by inoculation; insanitary conditions; lack of hospital accommodation; indifferent medical treatment; doubtful and untrained nursing.	27,444	5,165	18.82
Tissott, Heberden, and A. de Haen.	Pre-vaccination times. Conditions as above.	—	—	16.50

TABLE 20.—Continued.

Period.	Conditions.	Small-Pox Cases.	Small-Pox Deaths.	Small-Pox Fatality per cent.
Table M, p. 204, R. C. V., Third Report, 1875-85	Dr Proust ("Report on Vaccination," 1889, p. 45) for France gives 6,436,508 vaccinations, 270,590 re vaccinations. Average annual vaccinations to births, 79·8	133,894	22,102	16·50
Nineteenth century (1802-85); vaccinated and unvaccinated together. Mr Wheeler's Table K, p. 203, R. C. V. Third Report.	Cessation of variolous inoculation; vaccination enforced; improved sanitary conditions; modern hospitals; competent medical treatment; and trained nursing.	130,957	19,712	15·05
Nineteenth and twentieth centuries. London M. A. B. Reports (1870-1902).	Further improvement in nineteenth century advantages with respect to sanitation; hospital equipment; medical treatment and nursing.	71,804	11,869	16·53
Twentieth century; London M. A. B. Reports (1900-02).	Above improvement continued.	9,659	1,594	16·51
Leicester "unprotected," 1892-94	Under the "Leicester Method."	366	21	5·73
Leicester "unprotected," 1902-04	Under the "Leicester Method" improved.	731	30	4·10

The Statistical Committee of the Metropolitan Asylums Board would do well to study this table. If they would instruct their officers to disabuse their minds of vaccination, to cease wasting time on trivialities in dissecting vaccine variations in small-pox patients, and address themselves to the task of correcting their own inaccurate calculations, and to reducing small-pox fatality by sound hygiene, they would be doing good service to the teeming millions of London. As yet, they are wallowing in eighteenth century small-pox fatality. When they have reduced this, and brought it down to the abnormally low fatality-rate of "unprotected" Leicester, no one will blame or criticise them for prematurely rushing into print to announce their great achievement.

Even the case fatality-rate of the vaccinated patients in the London epidemic, as given in the special report, was 14.21 per cent. Compare this with the case fatality-rate of the unvaccinated patients at Leicester, in 1902-04 (given by Dr. Millard at page 21 of his report for 1904), of only 4.87 per cent. for the whole epidemic; also with the unvaccinated case fatality-rate for the 1904 portion of the epidemic, of only 1.6 per cent. London has not much to boast of, when its vaccinated case fatality-rate was, therefore, nearly three times as great as (or about 300 per cent. above) Leicester's unvaccinated case fatality-rate for the whole epidemic, and about nine times higher than (or nearly 900 per cent. above) Leicester's unvaccinated case fatality-rate for 1904.

The cost to the ratepayers of London, for the small-pox epidemic of 1901-02 (page 13, Vol. I.,

Metropolitan Asylums Board's report for 1901), is estimated at £500,000, but on page 27 of the Annual Report for 1902, the estimated total expenditure is given as £491,159, *exclusive* of furnishing and equipment of new supplemental buildings.

This cost is stupendous! However, as it is the specially prepared statement of the Board's Finance Committee, we must accept it as it stands. Later on, I purpose comparing this expenditure with that of Sheffield, Glasgow, and Leicester. (See Cost of "Leicester Method," page 477.)

CHAPTER LIII.

LEICESTER COMPARED WITH GLASGOW.

GLASGOW is an exceptionally well-vaccinated city. Its vaccinal default is only about two or three per cent., and that small percentage would include the insusceptible and those who are unfit for vaccination. It is, therefore, putting Leicester to a severe test to compare it with Glasgow. Leicester is worse off geographically, and also in regard to water supply. Even when the latter is supplemented by the great Derwent scheme, it will not be equal to that of Glasgow. If vaccination protects from small-pox, then Glasgow—like Leicester in 1871-72—was a “protected” city. If five per cent. of vaccinations reduced small-pox to a minimum in the early days of the nineteenth century—as was claimed at the time—then the 97 per cent. of vaccinations in Glasgow should have entirely banished the disease.

Instead of that, what do we find? According to the reports of the Medical Officer, small-pox has seldom been absent from Glasgow since 1855. Only a few odd years have been free from its visitations. The city suffered from a small epidemic during the years 1892-95, when there were 60 deaths; but a much more severe epidemic or epidemics occurred from 1900 to 1904, when, according to the Medical Officer's reports, 3,417

cases occurred, and 377 deaths from small-pox were registered in this perfectly vaccinated city! It is not, perhaps, the number of deaths which is so significant as the unreasoning alarm occasioned by the outbreak, the financial loss and disturbance of trade, and, what is even more remarkable, the rush for revaccination on the part of those already supposed to be "protected." If vaccination "protects," why be alarmed? And why should those who believe in the prophylactic value of vaccination—having "protected" themselves—proceed to coerce others against whom they are "protected," and who are quite willing to take their own risk—such as it is? This course of procedure constitutes an irrational tyranny.

When the small-pox epidemic began in 1900, an enormous number of persons were revaccinated. The expenditure under this head alone from 1st June, 1900, to 1st March, 1902, was no less a sum than £32,236!! Of this astounding amount, nearly £24,000 went into the pockets of medical practitioners as fees, apart from the cost of lymph, which was £4,570. Yet medical men are offended at any suggestion of pecuniary interest in vaccination! From April, 1900, to May, 1902, the huge total of 413,237 revaccinations were performed, almost sufficient, one would imagine, to have "protected" the whole of the United Kingdom.

The proportion of the revaccinations in 1901 was much greater in the immediate vicinity of the Small-Pox Hospital. Notwithstanding this, the attack rate was higher in this best-revaccinated area than in other parts of the city. Remarking

on this feature, the report of the Medical Officer for 1904, at page 53, says :—

“It is . . . worth remembering that the proportion revaccinated in 1901 in the districts immediately surrounding the hospital was greater than in the other districts where the disease was less prevalent. So that the greater incidence of attack in these districts on the present occasion is all the more striking.” Further comment on this is carefully avoided by the Medical Officer.

Another extract throws some light on the “doubtfully vaccinated” :—“Of 89 presenting no evidence of vaccination, 10 (of whom 8 were under 10 years of age) were found to have been certified as successfully vaccinated in infancy ; and of 66, where the evidence of vaccination was doubtful, 20 (of whom 13 were under 10 years of age) had been similarly certified” (page 54).

Following the “Leicester Method,” but a “long way off,” 3,401 contacts “were placed in the reception houses during the disinfection of their houses, and for observation.” Of these, 14 were found to be suffering from small-pox, and 54 subsequently developed the disease, so that 3,033 escaped unaffected.

The death-rate of the unvaccinated was swollen by the addition of 17 deaths of infants under six months, and by two cases of infants born in the hospital, of mothers suffering from small-pox. Three cases of small-pox amongst members of the staff are also recorded, and all of them appear

to have been revaccinated, although the operation is described as "vaccination," and not "revaccination." With reference to these three cases, the following on page 59, is worth quoting, as a "sparkling gem" from the pen of a vaccine devotee :—

"While the above are to be regretted as affording illustrations of disease contracted where it is most readily preventable, it is to be observed that the unsatisfactory nature of the vaccination which was performed attracted the notice of the medical staff of the hospital in each case before the symptoms of small-pox became manifest. They are not illustrations of failure on the part of vaccination to protect from small-pox, but of failure to ensure protection before exposure to infection."

Desperate efforts to obtain revaccination were made at private residences, and the result is described, on page 61, in the appended "racy" paragraph :—"There is no stimulus to an active participation in the protective value of vaccination equal to the occurrence of cases of small-pox among neighbours, and in consequence the efforts to obtain revaccination were most successful in those districts where the cases were most numerous. By house-to-house visitation, mostly in the evening, the Inspectors revaccinated 6,222 persons during the prevalence of the disease."

Bribes were even offered to the occupants of the "model" lodging houses. One "free" night was given for allowing the operation to be performed, and six additional free nights when the result

proved to be successful. This, of course, led to a considerable number of "voluntary" revaccinations.

Several circulars, signed by the Medical Officer, were issued, urging revaccination, and appealing for the co-operation of all classes to secure revaccination, for which fees were paid ranging from 1s. 6d. to 2s. 6d. per case. The annexed excerpts from the circular of 11th June, 1900, are worth placing on record, especially the spicy, appropriate Russian touch, "Police Department."

"In view of the present distribution of small-pox in Glasgow, the Corporation (Police Department), as Local Authority, desire to impress on the community the extreme desirability of each of its members acquiring the complete protection from the disease which recent successful revaccination affords. They are also desirous of affording to every inhabitant who may wish to be revaccinated, but who cannot afford to pay for the operation, facilities for having it done. . . .

"The Corporation believe that if by any means they could obtain the revaccination of every individual in Glasgow above ten years of age, and the primary vaccination of all who have never been vaccinated, an epidemic prevalence of small-pox would be impossible within their jurisdiction. . . .

"The Corporation rely upon your active co-operation in urging all persons within the scope of these conditions over whom you have

“influence to take advantage of this opportunity
 “of putting themselves beyond the reach of
 “small-pox.”

Of course, revaccination might prove effectual, when, by removal of the small-pox cases to hospital, all risk of infection had been put “beyond reach”!

But, why all this trouble in an already “protected” population? If, according to its critics, this had occurred in “unprotected” Leicester, it need not have occasioned much surprise.

In 1901, I was invited to Glasgow, and addressed a number of public meetings in that city, as well as in other parts of Scotland. I sought a friendly interview with the then Convener of the Health Committee, but, although he certainly received me, my suggestions were declined *without* thanks. The Lord Provost was more courteous, but equally certain that the authorities knew what they were doing. The sequel to this phase of the subject is particularly interesting. As the number of revaccinations performed mounted up towards the tremendous total already cited, so did the cases of small-pox increase. Opponents might urge that the greater amount of small-pox induced people to clamour for revaccination, but this is simply a matter of opinion upon which we will agree to differ. When, however, revaccination had not only utterly failed to check the spread of the disease, and there was a recrudescence of small-pox, the Public Health Committee actually resolved that a deputation ought to visit Leicester, in order to study our

"method" on the spot. This recommendation was rejected when it came up for confirmation by the City Council, but, as an alternative, they decided that Dr. C. Killick-Millard be asked to supply a copy of his report concerning small-pox in Leicester and its treatment. Naturally, this request was readily acceded to. Glasgow had a number of copies reprinted, and, if my information is correct, they sent many of these back to Leicester's Medical Officer, in recognition of his kindness in having supplied the original! Assuming such to have been the case, I wonder whether the object was to restrict the circulation in Glasgow, of a publication which so clearly demonstrated the folly of their mode of trying to control a small-pox outbreak?

At any rate, it is a very curious commentary on the value of vaccination that well-vaccinated Glasgow should flatly reject the advice tendered with the best possible intentions in the world by a member of unvaccinated Leicester's Sanitary Committee, and that, in the long run, revaccinated Glasgow should be driven to appeal to unvaccinated Leicester to help them out of their difficulties. And the still more remarkable fact is, that it was not long after Glasgow had sought Leicester's guidance that the epidemic commenced to decline in its intensity. Whether this was another striking example of cause and effect, or that much of the "inflammable material" for contracting small-pox had already been consumed, can be left for the reader to surmise. My own view need not be chronicled. The epidemic was of a very obliging character! It is rather singular

that it suddenly abated so as not to jeopardise the success of the Glasgow Exhibition—thus giving the authorities an opportunity to slacken their scare-creating energies—and then revived after the Exhibition was over.

The epidemic—or double epidemic, for it had two stages between 1900 and 1904—was not, in a comparative sense, large, although it resulted in a total of 3,417 cases, with 377 deaths, being a case fatality-rate of 11.03 per cent. But the cost was out of all proportion to the size of the epidemics. If there had never been a single vaccination for the preceding fifty years, there could not have been much more disturbance, trouble, anxiety, and harassing worry, or more money spent in coping with the visitation. During the ten years immediately preceding it, probably no less a sum than £25,000 had been expended upon vaccination, but that seems to have been regarded as useless. Otherwise so large an additional amount would not have been spent on vaccination and revaccination. Besides this, the hospital expenditure went up by leaps and bounds.

It is difficult to arrive at the exact cost of the epidemics, as even the authorities themselves appear unable to furnish this information. The ratio of increase in ordinary hospital expenditure, necessitated by natural growth of the population, was about 3.7 per cent., from 1883-84 to 1899-1900, as shown by the published returns in Table 62, page 49, of the Medical Officer's Report for 1910. These returns also show, on this basis, an excess of ordinary expenditure, 1900-04, of about £60,000, but this

does not take account of extraordinary expenditure, or of the outlay on vaccination and revaccination. We know from a statement printed on page 47 of the Special Report on Small-Pox, 1900-02, issued by the Medical Officer of Health, that revaccination alone cost £32,236 to March, 1902, and it would not be unreasonable to assume that before the end of the epidemics, in 1904, this amount had been increased to considerably over £40,000. Then about £30,000 was expended the first year of the outbreak in "special precautions" against small-pox, which, on a moderate computation, would reach £50,000 before the end of the epidemic in 1904. There would be much other expenditure besides these sums, but, in the absence of any official detailed account, which has never been, and probably cannot be, furnished, I conclude from the figures made known that small-pox must have cost well-vaccinated Glasgow a total of, at the very least, £150,000 during the years 1900-04. It will be seen, then, that notwithstanding the enormous and continuous annual expenditure on vaccination, when the hour of trial came, the supposed defences of the city failed, and a tremendous additional outlay was involved. What a different result the adoption of the "Leicester Method" would have yielded! But the Glasgow "City Fathers," and their Jenner-worshipping officials, were too "high and mighty" to accept its teachings when proffered in the early stages of their trouble. For this blind folly they paid dearly, and, compared with Leicester, they mulcted the city in excessive, and avoidable, expenditure and loss. All this is a very

• significant commentary on the "protection" of a population which Dr. J. B. Russell, the then Medical Officer of Health, stated prior to the outbreak, was "vaccinated and revaccinated to an extent unparalleled in any other locality." For a comparison of the cost to Leicester and Glasgow, see page ~~266~~. 492.

CHAPTER LIV.

LEICESTER SMALL-POX AND SHEFFIELD.

ANOTHER of these rigorous comparisons may be made with Sheffield, where the vaccinal default was very small (being only two per cent.) at the time of the 1887-88 small-pox epidemic. Dr. Barry carried out a special investigation of the epidemic for the Local Government Board. His report was considered such a conclusive and telling proof of vaccinal efficiency and efficacy that it became the dominant operating factor in inducing the Government to grant the Royal Commission of 1889. .

Dr. Barry's report is somewhat ponderous, and goes into numerous details, all intended to show what a powerful agent vaccination is in controlling and modifying small-pox. This report is prefaced by Dr. (afterwards Sir) G. Buchanan, Medical Officer of the Local Government Board.

Dr. Sinclair White, the then Medical Officer of Health for Sheffield, in his annual report for the year 1886, uttered these words of gratulation :—

“ I have gone carefully through the vaccination
“ statistics which have been kindly placed at my
“ disposal by the Clerks to the two Boards of
“ Guardians. From these it would seem that
“ somewhat less than five per cent. of the popula-
“ tion is growing up unvaccinated.

“ It is only fair to state that by far the larger

“proportion of the unvaccinated are children of migratory parents. These, leaving the districts in which they were born, are frequently untraceable afterwards, and hence escape the vigilance of the Vaccination Officers.

“Sheffield compares favourably with many large towns in respect of vaccination, and there would appear to be comparatively few anti-vaccinators in the town.”

He also declared that the town was so well vaccinated that there was no fear of small-pox. However, when the epidemic came, in 1887, in the dire distress and pitiless extremity to which the Authorities were driven, it was confessed they were beaten, and that the epidemic “must burn itself out”!!! So overtaxed, and, indeed, overwhelmed, was the department, that the statistics for 1887 were not even published until June, 1892! What would have been said if unvaccinated Leicester had found itself in such a dismal plight? But the ingenuity of Dr. Barry and Dr. Buchanan overleapt the despair of the Medical Officer, and, actually, to their own satisfaction, they found that the devastation wrought by this small-pox epidemic in a 98 - per - cent. - vaccinated - and - re-vaccinated community was at once a glorious proof and vindication of the inestimable value of vaccination as a prophylactic against small-pox!

Dr. Barry's report is said to be an exhaustive one, but it labours under several fatal defects. He professes to have carried out a vaccination census, but, although the population of Sheffield

was estimated at 316,288 in the middle of 1887, and was rapidly growing, several thousands of people being added before the close of the epidemic, he only canvassed 275,878, thus leaving out of account a population of about 45,000 persons, or 16.3 per cent. of the whole.

In his records, he only deals with 6,088 cases and 590 small-pox deaths, although there were, in all, 7,073 cases and 680 deaths, or, according to the returns of the Registrar-General, 688 deaths, and 4 deaths referred to chicken-pox. So that Dr. Barry omitted about one-sixth of the population, 985 (or nearly one-seventh) of the cases, and 98 (or one-seventh) of the deaths. If these significant omissions are any index to the reliability of the remainder of the report, it cannot be regarded as very trustworthy.

Dr. Buchanan, in his introduction to the report, waxed eloquent on the difference between the liability to death from small-pox amongst the vaccinated and the unvaccinated; but before touching his statistics, it would be serviceable to quote from his text. He commences by saying :—

“An epidemic of small-pox in Sheffield during
“the second half of the year 1887, at the time
“when the disease was at an unprecedentedly
“low ebb in England and Wales generally, has
“furnished your Medical Department (i.e., of the
“Local Government Board) with an opportunity
“of investigating the behaviour of small-pox
“under comparatively simple conditions and in a
“community large enough to reward a particu-
“larly careful statistical study.”

After referring to the population and number of cases and deaths dealt with in Dr. Barry's report, Dr. Buchanan proceeds :—

“ Dr. Barry has gone out of his way to avoid stating inferences, preferring to put multitudes of facts upon record ; and on this account his report has come to be of considerable dimensions. On the subject of small-pox as seen in England at the end of the nineteenth century, it is a storehouse of instruction for such of the public as care to be instructed, and adds in at least one important respect to the information hitherto before the medical profession.

“ The epidemic of small-pox at Sheffield has turned out to be one of importance, judged on the scale of English epidemics during the last sixteen years, and it has stood conspicuously above any other small-pox prevalence of the years 1887-88. . . .

“ For any preference shown by small-pox for Sheffield, as the place to be invaded, I can offer no sufficient explanation. While small-pox exists in England, or can be imported into England from abroad, its introduction into any English community is an affair of circumstance ; of the movements of persons and things that are able to carry its infection. . . .

“ So small-pox in the early part of 1887 made its appearance at Sheffield ; in two sub-districts of the borough almost simultaneously.”

These last are two delicious paragraphs. Dr. Buchanan says he “ can offer no sufficient explanation ” why small-pox invaded Sheffield,

Had such an outbreak occurred at Leicester, he would, of course, have found no such difficulty. If so disastrous "an affair of circumstance" could happen to a city efficiently "protected" from the inroads of small-pox, as Sheffield was at that time, of what possible use is vaccination?

Referring in a foot-note to Upper Hallam, Dr. Buchanan says :—

"Perhaps, in order to avoid misrepresentation, I may here record that this part of Upper Hallam had during the recent epidemic one death, and only one, from small-pox, and that was in a vaccinated adult. There were also 12 non-fatal cases in vaccinated persons, and one in an unvaccinated. The population is vaccinated to the extent of 99 per cent. of its number."

Then he goes on :—

"During the invasion period of Sheffield a good many cases of small-pox occurred that did not come to the knowledge of the Sanitary authority. That the Town Council did not become aware of these cases was in a measure due to the fact of their having no special authority to obtain information on the subject of infectious disease prevalence, no more, in fact, than sanitary authorities in general. . . .

* "Not all the small-pox cases that came under medical treatment were notified; and, further, it is certain that a number of early cases were not notified, owing to the mildness of the disease in individuals leaving them in ignorance of the nature of their complaint, and leading them to consider medical advice unnecessary."

Dr. Buchanan appears to forget that this neglect of notification, ought not to produce serious consequences in a population "protected" to the extent of 98 or 99 per cent. After blaming the Winter Street Hospital for radiating infection to the extremes of a vast circle of 4,000 feet, he states that this influence ceased soon after the patients were removed from the hospital. If it ever existed, it would, indeed, have been strange had it continued after the motive power had gone, but, curiously and incidentally, Dr. Buchanan also says, in a foot-note :—"It is true the epidemic itself was, at this time, on the wane." What logic and wisdom from the Chief Medical Officer of the Local Government Board! Moreover, twenty-five maps are added to the report to prove this "radiating" theory of infection. These I have carefully examined, and find that nineteen out of the twenty-five prove the exact opposite.

He next observes :—

"I turn to consider the fall in the mortality of small-pox as compared with other epidemic diseases since the more vigorous adoption of sanitary measures in Sheffield. Between an earlier and a later period, each of ten years, . . . measles has fallen from 100 to 78, scarlatina from 100 to 73, whooping cough from 100 to 93, diarrhoea from 100 to 72, diphtheria from 100 to 39, and fever from 100 to 34."

An elaborate calculation is then made as to the relative decline of small-pox, with a view of showing that it has declined more than the other zymotic diseases, owing to a special circumstance

viz., vaccination. The result is given as being a fall from 100 to 28.

Remembering that Dr. Buchanan is very careful to omit the epidemic of 1871-72, when, well vaccinated as Sheffield was, 1,000 small-pox deaths occurred, one is not very much impressed either with the logic or accuracy of his calculations. At all events, it is not very convincing.

In a foot-note, he observes :—

“These years, owing to their extravagant mortality are purposely excluded from the comparison of earlier and later small-pox periods. In the hope of avoiding misrepresentation, it may be proper that I should say, that if these years were included with the period 1861-70, the case in favour of the latter period, 1873-88, would be far stronger than above represented. There can be no suggestion of including 1871-72 with the later period.” We may ask—Why should these fatal years be omitted? If all “extravagant mortality,” be excluded, any required result may be obtained.

Then Dr. Buchanan winds up the first part of his introduction with this impartial declaration, significant for its contempt of the influence of sanitation, and its veiled thrust at Dr. Charles Creighton, whose shoe latchet he was “unworthy to unloose” :—

“Up to this point I have avoided mentioning the word ‘vaccination.’ It has been my object to discover, if it were possible, some influence other than vaccination to which the decline of

“small-pox and the behaviour of small-pox during the recent epidemic might be ascribed. I have been led to take this course, owing to the assertion frequently made by those who make it the business of their lives to decry vaccination, that the decline of small-pox in England, Germany, and elsewhere is a simple affair of improved sanitary circumstance—a curiously mistaken assertion which, strange to say, has been adopted into the article ‘Vaccination’ of the new edition of the *Encyclopædia Britannica*.”

Dr. Buchanan then proceeds by a peculiar process to attempt to prove what I think most people will regard as impossible:—

(1) That vaccinated children have an 11-fold immunity from attack, and a 381-fold security against death by small-pox;

(2) That the vaccinated class over ten years of age have a 5-fold immunity against attack, and a 51-fold security against death by small-pox, but if these people over ten were revaccinated, then

(3) The revaccinated over ten have a 31-fold immunity against attack, and a 644-fold security against death from small-pox.

Other rates are quoted, varying in degree, but the final one gives for the people of all ages, if vaccinated, a more than treble immunity against attack, and a 34-fold security against death from small-pox, “as compared with the non-vaccinated residents in invaded houses.”

After this wonderful conjuring, Dr. Buchanan refers to the small amount of small-pox amongst

the troops, the police force, and the postal staff, and goes on to say :—

“If one had never heard of ‘vaccination,’ but “had only the evidence of this particular report, “differentiating attacks and deaths by small-pox “among each and all of eight populations accord- “ing as individuals had or had not received a “certain ‘rite,’ there would be ground for strong “belief in the protective value of the rite, and “reason for seeking its general adoption. And “when it turned out that the rite in question “was none other than that which, ninety years “ago, was brought into use for the express pur- “pose of protecting against this very disease; “and, in addition, that major acceptance of the “rite has been accompanied, in exact measure, “by major security against small-pox; it would “seem that no reasoning mortal could hesitate “to find in this rite THE CAUSE, and THE “ONLY CAUSE, wanted to explain the observed “phenomena.”

In summing up, Dr. Buchanan observes, *inter alia*:—

“It has been found that if so-called ‘sanitary “circumstances’ have had any influence at all “upon the rate of attack and death, such influence “is not demonstrable, and can, at the utmost, “have been but small.”

Then comes the crowning folly and absurdity of this masterly (!) introduction by Dr. Buchanan :—

“For the rest, though I cannot profess to “estimate what vaccination has done, within the

“limits of the recent epidemic, for the population over ten years living in Sheffield, I may point out, for those who can imagine a sudden and complete forfeiture in 1887 by all the inhabitants of the protection which they have from vaccination, that the 200,000 people over ten living in Sheffield would (at the current rate of death observed among unvaccinated persons of that age up to the date of the census) have experienced over 10,000 deaths instead of the actual 368.”

Dr. Buchanan could not have considered what this means. It would represent an incredible death-rate of 50,000 per million, and if also applied to the 116,288 inhabitants under ten—and there is no reason why it should not be—it would have meant, in all, 15,814 deaths, or the still more incredible death-rate of over 79,000 per million!!! Even Dr. Buchanan, had he thought it out, would perhaps have seen how difficult it was to invoke a death-rate of 79 per 1,000, for one disease only, out of a total death-rate from all causes and at all ages, of only 21 per 1,000.

The two per cent. unvaccinated in Sheffield would include all those insusceptible to the operation, all the weakly, and all those certified by medical men as unfit. Such a remnant would be—apart from vaccination—in any case, sure victims for any epidemic disease. But, in his supreme anxiety to glorify vaccination, Dr. Buchanan forgot to mention this. Also, notwithstanding his professed aim to be impartial, he omitted to state that Dr. Barry had included in the unvaccinated class, 28 deaths of infants under

one month old. Of these, 3 were born with small-pox, 7 were born of mothers suffering from small-pox, 9 were born in houses where small-pox had occurred to other inmates, 9 were vaccinated but it failed to protect! Also there were 3 deaths of persons who had been "protected" by a previous attack of small-pox.

Dr. Buchanan also, perhaps unwittingly, left out of his florid introduction the fact that, included in the unvaccinated class were 22 cases complicated with child-birth, 40 cases under the vaccination age, 51 cases whose vaccination had been postponed owing to ill-health, 90 cases suffering from impaired health prior to the attack, and 41 where—although not opposed to vaccination—the operation, for some reason or other, had not been performed. In fact, in the whole canvass, only 58 were found in opposition to vaccination.

These important omissions and circumstances, coupled with the already-mentioned exclusion of about 45,000 of the population, 985 cases, and 98 deaths, would have made a material difference to his conclusions.

Even the hospital staffs, notwithstanding their vaccinated and revaccinated condition, did badly, for Mr. Alexander Wheeler, in his evidence before the Royal Commission, showed that the attack rate of the hospital staffs was nearly double that of the population, being 43.4 per 1,000 against only 23; whilst the staffs' death-rate was nearly three times more than the whole population of all classes, being 6.2 per 1,000 against only 2.1.

Why was Dr. Buchanan so silent about this important matter?

Dr. Buchanan took exception to Dr. Barry calling this outbreak insignificant. He says:—

“I notice that Dr. Barry, in a passage where he is concerned with numerical comparisons only, speaks of the recent epidemic as of ‘comparative insignificance.’ As it stands, the phrase may, I think, be liable to misconstruction. So far as can be judged from the readiness with which the disease spread, from its persistence in the borough, and from its rate of fatality, I should be disposed to say of it that the epidemic was of a severe description. I see no suggestion of mildness in the quality of the small-pox which prevailed. But I see that this epidemic did less mischief than previous epidemics, because comparatively few of the individual members of the Sheffield community had been left without protection (complete or partial) against the prevalent infection.” How it could be so severe, and yet do so little mischief, we are left to adjust as best we can.

Whatever Dr. Barry might have thought on this point, in the concluding part of his report he states:—

“The total amount expended by the Corporation, the Guardians, and the Small-Pox Associations, together, was £32,257 4s. 7d., and of this sum £26,947 6s. 9d. was paid by the Sanitary and Vaccination authorities themselves in combating the epidemic.

“The expenditure referred to above forms but

" a fraction of the total money loss caused to the
 " inhabitants of Sheffield by this epidemic of
 " small-pox. Amongst other direct losses as to
 " the amount of which no exact estimate can be
 " formed, must be reckoned loss of wages during
 " illness, expense of doctors, maintenance of sick,
 " cost of funerals, etc. The actual loss to the
 " trade of Sheffield which was indirectly caused
 " by the epidemic cannot be guessed at. For a
 " long time Sheffield, as a town, was avoided by
 " all outsiders except those persons whose business
 " rendered their visit to it imperative, and even
 " these did not sleep in the town if they could
 " avoid doing so. The hotels were consequently
 " empty. The Sheffield people themselves were,
 " in a sense, boycotted by the inhabitants of the
 " neighbouring towns, and all excursion trains to
 " or from the town were stopped. During the
 " year ending February, 1888, it was stated that
 " the Sheffield tramways alone carried 200,000
 " fewer people than usual.

" In this section I have referred to *pecuniary*
 " losses only, for no statistics can estimate the
 " amount of suffering caused by so widespread an
 " epidemic. In many houses, especially those
 " inhabited by the unvaccinated, where death has
 " spared the inmates, a legacy of blindness, or
 " permanent disfigurement, or weakened health
 " and impaired usefulness, has been left behind—
 " of such losses no account can be rendered."

Dr. Barry is not quite as impartial here as
 Dr. Buchanan would have us believe, but
 what a terrible indictment of a city which, it is
 admitted on all hands, had scrupulously obeyed

the vaccination laws, and was as fully vaccinated as any possible system of compulsory vaccination could secure. Moreover, many thousands of pounds had been spent, year by year, on the "protective" process of vaccination, and then it failed at the critical moment, and a further £32,000 was flung away. A comparison with Leicester of the cost to Sheffield will be found at page 492.

Contrast all this paralysis of trade, confusion, turmoil, financial loss, and fearful disaster (the walls placarded all over with posters calculated to help create and maintain the scare), with the quiet, unostentatious, but prompt and effective working of the "Leicester Method" by the officials at unvaccinated Leicester. No placarding of the walls, no terrifying newspaper paragraphs, no excessive expenditure on vaccination and revaccination, no addition to the normal cost of hospital administration, and no increase of the rates. Which is best?

CHAPTER LV.

CRUCIAL COMPARISON FOR LEICESTER.

WITH a desire of putting Leicester to the severest possible test, I will now compare it with:— (1) Japan, which has not only copied Western ideas with respect to vaccination, but has gone one better (!) in having the whole population periodically revaccinated; (2) with the revaccinated British Army—all strong, selected men in the very prime of life, who have passed a searching medical examination, and are also under constant supervision—serving at home, in India, and in the Colonies; and (3) the Royal Navy, also composed of picked men, thoroughly “protected” by vaccination and revaccination, and who have had to come satisfactorily out of a most rigid medical examination.

This incisive comparison is of Leicester’s practically unvaccinated civil population, at all ages, and of both sexes; with the revaccinated inhabitants of Japan, at all ages, and of both sexes; and also with a specially selected healthy body of strong men who form our army and navy, likewise revaccinated:—



DIAGRAM C.

ILLUSTRATING TABLE 21 & 22.

COMPARISONS WITH LEICESTER.

SMALLPOX FATALITY RATES, per cent. of cases, in vaccinated and re-vaccinated populations compared with "unprotected" Leicester, in varying periods from 1860 to 1908.

VACCINATED AND RE-VACCINATED
POPULATIONS.

PRACTICALLY UNVACCINATED
AND
"UNPROTECTED" LEICESTER.

JAPAN LONDON GLAS- SHEF- BRITISH
GOW. FIELD. ARMY. NAVY. "UNPROTECTED" LEICESTER

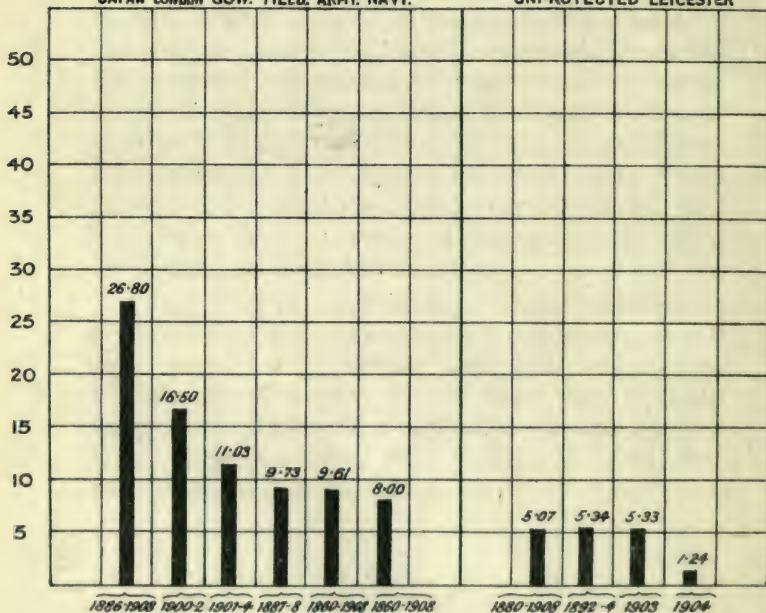


TABLE 21. (See Diagram C.)

Name.	Period.	Small-Pox.		Fatality- Rate per cent. of Cases
		Cases.	Deaths.	
Japan	1886-1908	288,779	77,415	26·8
British Army (United Kingdom)	1860-1908	1,355	96	7·1
British Army (India)	1860-1908	2,753	307	11·1
British Army (Colonies)	1860-1908	934	82	8·8
Royal Navy	1860-1908	2,909	234	8·0
Grand Totals and case fatality rate per cent. over all		296,730	78,134	26·3
Leicester (since giving up vaccination)	1880-1908	1,201	61	5·1

In this comparison, I have given the numbers of revaccinated cases, and deaths, and each fatality-rate separately and together, so that they may be compared either way with Leicester. In pro-vaccinist language, may I ask, if the excessive small-pox fatality of Japan, of the British Army, and of the Royal Navy, are not due to vaccination and revaccination, to what are they due? It would afford an interesting psychical study were we able to know to what heights of eloquent glorification Sir George Buchanan would have soared with a corresponding result—but on the opposite side.

CHAPTER LVI.

GENERAL DEATH-RATES COMPARED.

I NOW give a comparison of the general death-rate of Leicester with London, the large towns, and England and Wales. This shows that in the quinquennium 1868-72, the death-rate of Leicester was 3.2 per thousand above the Metropolis; 1.5 per thousand above the cities and towns then grouped together by the Registrar-General, for the purpose of showing the death-rate prevailing in the most congested urban districts; and 4.6 per thousand above England and Wales.

Now, in the three years, 1908-1910, the death-rate of Leicester is 1.1 per thousand below that of London, 1.9 per thousand below the death-rate of the seventy-seven great towns, and 1.8 below that of England and Wales. These death-rates are shown in the accompanying table:—

TABLE 22.

DEATH-RATES OF LEICESTER, LONDON, GREAT TOWNS, AND ENGLAND AND WALES.

	Quinquennial Periods.								
	1868-72.	1873-77.	1878-82.	1883-87.	1888-92.	1893-97.	1898-02.	1903-07.	1908-10. (3 years)
Leicester -	26.8	24.5	22.2	19.9	18.3	17.3	16.8	13.8	12.4
London -	23.6	22.4	22.0	20.4	19.9	18.8	18.2	15.2	13.5
*Great Towns	25.3	24.0	22.9	21.9	21.2	19.8	19.2	16.1	14.3
England and Wales -	22.2	21.4	20.3	19.4	19.0	17.8	17.4	15.4	14.2

*Glasgow, Edinburgh, and Dublin were included in the Great Towns until 1869, but afterwards excluded. From 1870 only English and Welsh towns, numbering 20, were included in this group. In 1882 this number was increased to 28; in 1892, to 33; in 1902, to 76; in 1910, to 77; and in 1912 to 94.

In his "Annual Summary" for 1910, the Registrar-General gives a table (page 9) showing the mortality of 136 smaller towns, and that of England and Wales, less the 77 great towns, and the 136 smaller towns. This, therefore, contrasts the urban with the rural populations. From this table I extract the following figures, and add Leicester, for the purpose of a further, and final, comparison.

TABLE 23.

ANNUAL DEATH-RATE, PER 1,000 LIVING, FOR THE YEAR 1910.

	Crude Death-Rate.	Corrected Death-Rate.
England and Wales	13.4	13.4
77 Great Towns	13.4	14.8
136 Smaller Towns	12.4	12.9
England and Wales (less the 213 Towns)	13.6	12.8
Leicester	11.29	12.1

The Registrar-General appends a foot-note, pointing out that—

"Owing to the difficulty of distributing to their proper areas deaths occurring in public institutions, it is probable that the death-rate of the rural area is somewhat over-stated, and those of the greater and smaller towns slightly under-stated."

The Registrar-General is probably right, but this will not disturb the highly favourable, and, indeed, flattering, position of Leicester in the comparison which the above crowning test brings to view. There is no need to add any further comment. If ever figures taught a lesson, the benefits of sanitation are here set forth.

These magnificent and incomparable results, must be considered in the light of Leicester's

unfavourable geology and geographical position and the circumstances of its population. The town is in a valley, with a sluggish river, a clayey, impervious, and water-logged subsoil; while its population is, for the most part, of the artisan class—working in factories and warehouses. And, what is still more inimical to health, and especially to the younger lives, a very large proportion of the married women work in warehouses and factories. What all this means must be borne in mind. The position Leicester has achieved is, indeed, a proud one, and to have raised itself by sanitation from being the unhealthiest of the large manufacturing towns, to the enviable altitude of being the most healthy, undoubtedly constitutes a marvellous record. Think of the vast array of lives that might have been saved, not only in the United Kingdom, but throughout the world, if instead of stamping vaccine virus into healthy human bodies, Sanitary Authorities had earlier placed their trust in Municipal Cleanliness alone!

With so remarkable a history, the people of Leicester can treat with indifference and scorn the ignorant sneers which are occasionally sought to be indulged in at their expense. The very fact that the "Leicester Method" has been copied as far and wide as civilisation extends, proves that anti-vaccinators have been pursuing the right course, whilst their opponents were on the wrong track. Imitation is said to be the sincerest form of flattery; therefore, Leicester may, with confidence and self-reliance, continue to pursue its enlightened and enlightening policy of

"SANITAS SANITATUM, OMNIA SANITAS!"

PART VI.

THE ROYAL COMMISSION ON VACCINATION.

CHAPTER LVII.

THE INVESTIGATION ENDED.

AT the close of its prolonged inquiry, the Royal Commission took ample time to consider its final verdict, which was not published until 1896. No one who appeared as a witness against vaccination could feel that it was likely to be in complete accordance with the evidence. The strained attempts in the Report to vindicate vaccination, in spite of much of the testimony given, fully justify those who formed that forecast. It was, perhaps, too much to expect that a tribunal, constituted as the Commission was, would boldly and fearlessly cast aside the exploded dogma of vaccine prophylaxy. That has yet to come, and come it will. The whole proceedings and Final Report of the Royal Commission cast a lurid light on the Parliamentary debate, at which the Government decided to appoint the Commission, and on the grounds which led them to arrive at such a decision.

We may now recall the speeches of Mr. Ritchie, President of the Local Government Board, Dr. Farquharson (in seconding Mr. Picton's resolution), Sir Lyon Playfair, and Sir W. Guyer Hunter, M.D., on that memorable occasion—5th April, 1889—when the Government intimated their decision to appoint the Royal Commission. These all strongly emphasised the belief of the speakers that the inquiry would result in establishing vaccination on a firmer basis than heretofore. Dr. Barry's report on the Sheffield epidemic of 1887-88 had just been issued, with Sir George Buchanan's flaunting and exaggerated introduction. The time was felt by pro-vaccinists to be ripe for crushing the revolt against vaccination out of existence once and for all. This belief, that the anti-vaccinators would be pulverised, and that the inquiry would prove to be the engine to effect that object, materially contributed to the decision of the Government, but, in the end, the design egregiously failed!

CHAPTER LVIII.

HOW THE COMMISSION "BLINKED" THE FACTS.

THE very palpable anxiety on the part of the majority of the Royal Commission, to ignore almost anything and everything except vaccination, and its supposed influence in controlling, small-pox—as commented upon by a minority of its members—did not escape the notice of Professor Alfred Russel Wallace, who included a chapter, entitled "Vaccination a Delusion; its Penal Enforcement a Crime," in his masterly work, "A Wonderful Century," and from which I extract the following:—

"To return to the Majority Report. Its references to Leicester are scattered over eighty pages, "referring separately to the hospital staff, and "the relations of vaccinated and unvaccinated "to small-pox; whilst in only a few paragraphs "(paragraphs 480-486) do they deal with the main "question and the results of the system of isolation adopted. These results they endeavour to "minimise by declaring that the disease was "remarkably 'slight in its fatality,' yet they end "by admitting that 'the experience of Leicester "'affords cogent evidence that the vigilant and "'prompt application of isolation . . . is a "'most powerful agent in limiting the spread of

" 'small-pox.' A little further on (paragraph 500),
 " they say, when discussing this very point—how
 " far sanitation may be relied on in place of vac-
 " cination—'The experiment has never been tried.'
 " Surely a town of 180,000 inhabitants which has
 " neglected vaccination for twenty years is an
 " experiment. But a little further on, we see the
 " reason of this refusal to consider Leicester a
 " test experiment. Paragraph 502 begins thus:—
 " 'The question we are now discussing must, of
 " 'course, be argued on the hypothesis that vac-
 " 'cination affords protection against small-pox.'
 " What an amazing basis of argument for a Com-
 " mission supposed to be inquiring into this very
 " point! They then continue:—'Who can pos-
 " 'sibly say that if the disease once entered a
 " 'town the population of which was entirely or
 " 'almost entirely unprotected, it would not spread
 " 'with a rapidity of which we have in recent
 " 'times had no experience?' But Leicester *is*
 " such a town. Its infants—the class which
 " always suffers in the largest numbers—are almost
 " wholly unvaccinated, and the great majority of
 " its adults have, according to the bulk of the
 " medical supporters of vaccination, long outgrown
 " the benefits, if any, of infant vaccination. The
 " disease has been introduced into the town twenty
 " times before 1884, and twelve times during
 " the last epidemic (Final Report, paragraphs 482
 " and 483). The doctors have been asserting for
 " years that once small-pox comes to Leicester, it
 " will run through the town like wild-fire. But
 " instead of that, it has been quelled with far less
 " loss than in any of the best-vaccinated towns in

"England. But the Commissioners ignore *this*
 "actual experiment, and soar into the regions of
 "conjecture with 'Who can possibly say?'—con-
 "cluding the paragraph with, '*A priori* reasoning
 "'on such a question is of little or no value.'
 "Very true. But *a posteriori* reasoning, from the
 "cases of Leicester, Birmingham, Warrington,
 "Dewsbury, and Gloucester *is* of value; but it is
 "of value as showing the utter uselessness of
 "vaccination, and it is therefore, perhaps, wise
 "for the professional upholders of vaccination to
 "ignore it. But surely it is *not* wise for a pre-
 "sumably impartial Commission to ignore it as
 "it is ignored in this Report."

In a foot-note, Professor Wallace says:—

"Although the Commission make no mention
 "of Mr. Biggs' tables and diagrams showing the
 "rise of infant mortality with increased vaccina-
 "tion, and its fall as vaccination diminished, they
 "occupied a whole day cross-examining him upon
 "them, endeavouring by the minutest criticism
 "to diminish their importance. Especially it was
 "urged that the increase or decrease of mortality
 "did not agree *in detail* with the increase or
 "decrease of vaccination, forgetting that there are
 "numerous causes contributing to all variations
 "of death-rate, while vaccination is only alleged
 "to be a *contributory* cause, clearly visible in
 "general results, but not to be detected in smaller
 "variations (see Fourth Report, Q. 17,513-17,744,
 "or pages 370 to 381). Mr. Biggs' cross-examina-
 "tion, in all, occupies 110 pages of the Report."

It will be seen that Professor Wallace is
 entirely of opinion that a strong bias influenced

the Royal Commission. The Dissentient Commissioners held the same view.

VIEW OF THE DISSENTIENT COMMISSIONERS.

The opening paragraph of the statement by Dr. (now Sir) William J. Collins and the late Mr. James Allanson Picton, then M.P. for Leicester, emphasises this view. They agree with Professor Wallace, and the grounds of their dissent from the Commission's Report are so extremely instructive as to be well worthy of reproduction *in extenso* :—

"We entirely agree with the Report of our
 "colleagues in so far as it shows the great
 "change of professional and scientific opinion
 "since vaccination first engaged the attention of
 "the Legislature, and since the passing of the
 "first compulsory Act in 1853. We hold with
 "them that the prophylactic power of vaccination
 "has been at least exaggerated, and that dangers
 "incidental to the practice, though at one time
 "denied, 'are undoubtedly real and not incon-
 "siderable in gross amount.' We gladly added
 "our signatures to theirs in support of the Com-
 "mission's interim report recommending the
 "abolition of repeated prosecutions, and also
 "that recalcitrants against the vaccination laws
 "should no longer be subjected to the same
 "treatment as criminals. We now desire also,
 "if compulsion in any form is to be maintained,
 "to support their final recommendations for the
 "relief of conscientious nonconformity with the
 "law. We also gladly endorse the precautions
 "they recommend with the object of preventing

"avoidable dangers in connection with the operation. There is no difference among us on these points; so far as these recommendations go, the Commission is absolutely unanimous. We feel, however, that the evidence not only justifies, but requires a more complete reconsideration of the present state of the law as well as of the methods adopted in dealing with small-pox. For this purpose it is necessary to review in some detail the history of small-pox and the various preventive measures which have at different times been in vogue, and to scrutinise the grounds on which one alone of these preventive measures has been relied upon to the exclusion of others. We desire also to give reasons for thinking that other more effective and practicable (as well as less objectionable) modes of stamping out small-pox, or protecting communities from its introduction, are available. We venture to think that the Report of our colleagues, in the preparation of many portions of which we have borne our part, has approached the consideration of the behaviour of small-pox, and the means of preventing it, too exclusively from the standpoint of vaccination, and that too little attention has consequently been accorded to sanitary organisation, prompt notification and isolation, measures of disinfection and cleanliness, and healthy conditions of living, which we believe to be of the first importance in preventing and controlling outbreaks of small-pox."

CHAPTER LIX.

A "ONE-SIDED INQUIRY."

AFTER these eminent opinions respecting the work and outcome of the Royal Commission, laymen may be pardoned for regarding its operations as a "One-Sided Inquiry." The proofs of its partiality and prejudice in favour of vaccination may thus be summarised:—

(1) The terms of reference contained five paragraphs devoted to the upholding of vaccination, and only one (No. 2) to other means of controlling small-pox.

(2) Those constituting the Royal Commission were for the most part medical men, or the relatives and friends of medical men, known to be strongly in favour of vaccination.

(3) The fact that paragraph No. 2 was practically ignored in the inquiry, as proved not only by the Final Report, but also by the emphatic statement of two members of the Commission itself, "that the report of our colleagues . . . has approached the consideration of "the behaviour of small-pox, and the means of "preventing it, too exclusively from the stand-point of vaccination, and that too little attention "has consequently been accorded to sanitary "organisation, prompt notification and isolation, "measures of disinfection and cleanliness, and "healthy conditions of living, which we believe "to be of the first importance in preventing and

"controlling outbreaks of small-pox." (Paragraph 1, Minority Report.)

(4) The strongly significant statement of the Royal Commission itself, in its Final Report, that "the question that we are now discussing must, of course, be argued on the hypothesis that vaccination affords protection against small-pox." (Paragraph 502, Final Report.)

Nothing more need be added to prove that the vaccination question still needs a fair and thoroughly impartial investigation. Up to the present it has certainly never had one.

Notwithstanding this one-sided character of the inquiry of the Commission, the amount and damaging nature of much of the evidence adduced, speedily compelled a modification of the law. The Commission were unanimously of opinion that imprisoned defaulters, who hitherto had been treated as criminals under the penal code, should rank as first-class misdemeanants. The Commission also recommended the entire abolition of cumulative penalties. So obvious, indeed, apart from the merits of vaccination, was the gross injustice which had for so long been endured by anti-vaccinists, that these striking concessions—formerly appealed for in vain—were not only published in an early Interim Report (issued four years before the appearance of the Commission's Final Report), but they were at once acted upon, and without legislation, in effect, forthwith became the law of the land. These, however, were only part of the concessions made by the Royal Commission in their Final Report, to be found tabulated in the next chapter.

CHAPTER LX.

THE ROYAL COMMISSION'S FINAL REPORT.

ALTHOUGH appointed in 1889, the Final Report of the Royal Commission was not issued until 1896. A ponderous mass of evidence was given, but, for the most part, that dealing with "What means other than vaccination can be used for diminishing the prevalence of small-pox," received scant consideration, and was practically ignored.

After these many years of careful deliberation, the holding of 136 meetings, the examination of 187 witnesses, and listening to their evidence, the Commission was unable to reach definite conclusions. All they were able to say was, not that "We are now positively convinced, and absolutely sure, as to the prophylactic virtues of vaccination," but only "We think!" This is an expression of irresolution and uncertainty rather than of strength and conviction. "We think:—

"(1) That it diminishes the liability to be attacked by the disease.

"(2) That it modifies the character of the disease, and renders it (a) less fatal, and (b) of a milder or less severe type.

"(3) That the protection it affords against attacks of the disease is greatest during the years immediately succeeding the operation of

“vaccination. It is impossible to fix with precision the length of this period of highest protection. Though not in all cases the same, if a period is to be fixed, it might, we think, fairly be said to cover in general a period of nine or ten years.” (Paragraph 377, Final Report.)

The Final Report consists of 537 paragraphs, a considerable number of which are laboured efforts in the cause of vaccination. Notwithstanding this, it confirmed to anti-vaccinators the concessions contained in the Fifth Report, and added other recommendations, of which the following were the principal:—

- (1) The entire abolition of repeated penalties.
- (2) That defaulters imprisoned under the Vaccination Acts should be treated as first-class misdemeanants, and not as common felons.
- (3) Statutory declaration of objection to vaccination to bar legal proceedings against parents.
- (4) Calf lymph to be provided where arm-to-arm vaccination was objected to.
- (5) Illness supervening on vaccination to be treated gratis.
- (6) Domiciliary vaccination to replace public vaccination stations.
- (7) More careful observation of the state of the health of the child to be vaccinated.
- (8) Postponements in the event of ill-health to be made more certain and operative.
- (9) Extension of the vaccination age.
- (10) Five years trial of these recommendations.

Now, if the law was so immaculate and working so perfectly, as the public were repeatedly assured, how came it to require these alterations?

No one could suppose that, unless it had been completely established that these amendments of the existing law were absolutely necessary, the Royal Commission, constituted as it was, would have recommended them. Yet for nearly thirty years anti-vaccinators had appealed in vain for several of these emendations. We see, therefore, that the result of the inquiry was not to recommend increased stringency in the enforcement of the law, but every recommendation was in the direction of modifying the law, and abolishing its more rigorous provisions.

The fact also that the five years experimental period, fixed by the Commission, elapsed without any dire results accruing, and that, although the law has since not only been continued, but far more extensively relaxed, with further beneficial results, proves conclusively, on the Commissioners own premises, that their fears were baseless, and that they might just as well have recommended the entire repeal of the Vaccination Acts.

PART VII.

PARLIAMENT AND THE ROYAL COMMISSION.

CHAPTER LXI.

THE BILL OF 1898.

THE Government allowed nearly two years to pass before giving Parliament the opportunity to consider the recommendations of the Royal Commission. In 1898 the Right Hon. Henry Chaplin, who was then the President of the Local Government Board, brought in a Vaccination Bill, being the seventh dealing with this vexed question. The Bill was a great disappointment to anti-vaccinators, as they felt justified in anticipating that at least the whole of the Royal Commission's recommendations would be embodied in the measure. It was endorsed by Mr. Chaplin, the Right Hon. A. J. Balfour, Sir Matthew White-Ridley, and the Attorney-General, and was largely transformed during its passage through Parliament.

Mr. Chaplin had evidently been well primed by the medical officials of the Local Government Board. Like Sir Lyon Playfair, he was "a man

after their own heart." His flamboyant speech on the great scientific discoveries respecting calf lymph was amusing to those who knew the real facts.

Although "glycerinated calf lymph" had been on the market for very many years, being patented in 1882 by E. T. Darke ("Vaccination Inquirer," 1st June, 1898, page 46), the knowledge had apparently, only just been imparted by some medico of the Local Government Board as an occult secret reserved for Mr. Chaplin's especial benefit, to flash—like the waving of a magician's wand—upon an astonished House of Commons.

In the "Times," of 16th March, 1898, Mr. Chaplin, on introducing the Vaccination Bill, and referring to the Final Report of the Royal Commission, is thus reported :—

"I do not dwell upon the views emphatically pronounced upon the necessity for vaccination and its efficiency, in either preventing or diminishing the evils of small-pox. They appear to me to be conclusive and unanswerable."

Alluding to some of the recommendations, he said :—

"One of these relates to the kind of lymph which they recommend should be used in future, and on this point I may remind the House that there have been some remarkable discoveries in recent years, and if we take advantage of them, as I hope and believe we shall, they will go far to revolutionise the whole of the previous system of public vaccination. I am referring to the results which it is proved

"are obtained from the preservation of lymph
"taken from the calf in glycerine. . . .

"These investigations were conducted by Sir
"Richard Thorne and Dr. Copeman on behalf of
"the Local Government Board, and since the
"Report of the Committee was published, into
"the systems in practice abroad, in Paris, in
"Berlin, Dresden, Cologne, and Geneva, from
"which it appears that calf lymph preserved in
"this way possesses remarkable properties and
"advantages. In the first place, all extra
"organisms when the lymph is mixed with
"glycerine are destroyed. For instance, it is
"found that such organisms as the microbes of
"tubercle, erysipelas, and diphtheria, and other
"diseases (even when they have been added for
"the purpose of experiment) very shortly dis-
"appear, although it retains its full activity for
"vaccination purposes.

"Secondly, it can be kept for long periods,
"and upon an emergency large quantities can
"with facility be supplied; and, thirdly, which is
"a matter of the first importance, the necessity
"for arm-to-arm vaccination, and consequently
"all risk and possibility of inoculation with
"syphilis, whatever it may have been heretofore,
"wholly disappears. On this point the Commis-
"sion makes two suggestions—that lymph shall
"be placed within the reach of all, and that
"no parents shall be required to submit their
"children for vaccination by means of anything
"but calf lymph."

Mr. Chaplin failed to explain why a system
of vaccination, said to be working perfectly,

should require to be revolutionised. Nor did he condescend to illustrate the wonderful process by which all malific and extraneous organisms, which are known to be present in the lymph in its crude state, are destroyed, and how, when the potency of the lymph has been attenuated to the extent of no less than 75 to 94 per cent. by the addition of water and glycerine, it "retains its full activity for vaccination purposes." Only Mr. Chaplin knows this secret, for those who informed him certainly do *not* know how this hocus-pocus is accomplished.

The following is a copy of the Bill as introduced to Parliament:—

A.D. 1898.

A BILL TO AMEND THE LAW WITH RESPECT TO VACCINATION.

Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

Vaccination
within 12 months
after birth.
30 & 31 Vict. c.84.

1.—(1) The period within which the parent or other person having the custody of a child shall cause the child to be vaccinated shall be *twelve months* from the birth of the child, instead of the period of three months mentioned in section sixteen of the Vaccination Act of 1867, and so much of that section as requires the child to be taken to a public vaccinator to be vaccinated shall be repealed.

(2) The public vaccinator of the district shall, if the parent or other person having the custody of a child so requires, visit the home of the child for the purpose of vaccinating the child.

(3) If a child is not vaccinated within *nine months* after its birth, the public vaccinator of the district shall visit the home of the child, and shall offer to vaccinate the child with glycerinated calf lymph.

2. An order under section thirty-one of the Vaccination Act of 1867, directing that a child be vaccinated, shall not be made on any person who has previously been convicted of non-compliance with a similar order relating to the same child.

Provision against repeated penalties.

3. The Local Government Board shall have the same powers of making rules and regulations with respect to public vaccinators (whether under contracts made before or after the *passing of this Act*) as they have with respect to vaccination officers, and any rules or regulations made by the Board with respect to vaccination, whether under this or any other Act, shall, while in force, have effect as if enacted by this Act.

Regulations of Local Government Board.

4. The enactments mentioned in the schedule to this Act are hereby repealed to the extent specified in the third column of that schedule.

Repeal.

5.—(1) This Act shall not extend to Scotland or Ireland.

Extent, commencement, and short title.

(2) This Act shall come into operation on the *first day of January, one thousand eight hundred and ninety-nine*.

(3) This Act may be cited as the Vaccination Act, 1898, and the Vaccination Act of 1867, the Vaccination Act, 1871, the Vaccination Act, 1874, and this Act shall be construed together as one Act, and may be cited collectively as the Vaccination Acts, 1867 to 1898.

30 & 31 Vict. c. 84.
35 & 36 Vict. c. 98.
37 & 38 Vict. c. 75.

CHAPTER LXII.

LEICESTER'S EFFORT TO ABOLISH PENALTIES.

As soon as the Bill was published, Sir John Rolleston opened a correspondence with Mr. Chaplin as to the full meaning of Clause 3. Although not specifically mentioned in the Bill, the questions raised related to Vaccination Officers acting independently of Boards of Guardians and the setting up of the Local Government Board above Parliamentary control.

Mr. Chaplin concluded his first letter thus:—
“Mr. Chaplin finds it difficult to understand
“how even the opponents of vaccination can
“regard the Bill otherwise than as introducing
“marked improvements from their point of view
“in the existing law.”

His Secretary, in his second and last letter, said:—“While he was glad to reply to your
“previous letters out of personal courtesy to
“yourself, it would be quite impossible for the
“Department to pursue correspondence on this
“subject in reply to the innumerable communica-
“tions which they receive.”

To make the matter perfectly clear, Mr. Pickersgill moved the addition of the following clause to the Bill:—

“Notwithstanding anything contained in the

Vaccination Acts, no parent or other person having the custody of a child shall be prosecuted for neglecting or refusing to vaccinate such child unless and until the sanction of the Guardians has been obtained for such prosecution."

There would have been no mistaking the meaning of this clause, but, under pressure from various quarters, and an ambiguous declaration from Mr. Chaplin, Mr. Pickersgill was, unfortunately, induced to withdraw it. Both he and the House of Commons were shamefully betrayed, for, as soon as the Bill became an Act, Vaccination Officers commenced to prosecute in defiance of the Guardians.

The introduction of the Vaccination Bill of 1898 to the House of Commons gave a further opportunity for bringing the question to the notice of the town—through its municipal representatives—and on 24th May, 1898, at a special meeting of the Leicester Town Council, I had the pleasure of moving the following resolution, which was seconded by Mr. Councillor Richards, and carried :—

"That this Council having on the 28th January, 1890, affirmed that 'it is inexpedient and unjust to enforce vaccination under penalties upon those who regard it as unadvisable and dangerous,' expresses its regret that the Government, in the Vaccination Bill now before Parliament, has not adopted the unanimous recommendation of the Royal Commission to abolish the enforcement of vaccination by penalties; and, further, this Council is of opinion that Clause 3 of the Bill, which proposes to empower the Local Govern-

ment Board to act independently of Parliamentary control, introduces a dangerous principle inimical to true local government, and should be unconditionally withdrawn."

Copies of this resolution were forwarded to the Prime Minister, Lord Salisbury; the Leader of the House of Commons, the Right Hon. A. J. Balfour; the President of the Local Government Board, the Right Hon. Henry Chaplin; the Members for Leicester, Mr. Henry Broadhurst and Mr. Walter Hazell; and the Member for Harborough (the County Division in which the Borough is included), Mr. J. W. Logan.

Public meetings were held in the several Wards in the town, at which resolutions condemning the Bill were passed unanimously. The Board of Guardians not only passed a resolution against compulsion, but another comprehensive resolution against the Bill, moved by Mr. A. Andrew, the chairman. Copies of this were forwarded to other Boards, inviting them to join in the protest against the subordination of the Guardians' authority to their Vaccination Officers.

An interview was held with Mr. W. Hazell, M.P., as to the course to be followed in Parliament. The "Liberal Thousand" and the "Unionist Executive" both passed resolutions against the Bill, and the Mayor, in answer to an influentially signed requisition, called a town's meeting to consider the question, at which resolutions against the Bill were unanimously adopted.

It will be seen, therefore, that Leicester took its due share in the effort either to defeat or

improve the Bill as introduced into Parliament. In the result, the "Bill" was extended and transformed into the following "Act":—

THE VACCINATION ACT, 1898.

A.D. 1898.

[61 and 62 VICT. CH. 49.]

CHAPTER 49.

An Act to amend the Law with respect to Vaccination. [12th August, 1898.]

Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

1.—(1) The period within which the parent or other person having the custody of a child shall cause the child to be vaccinated shall be six months from the birth of the child, instead of the period of three months mentioned in section sixteen of the Vaccination Act of 1867, and so much of that section as requires the child to be taken to a public vaccinator to be vaccinated shall be repealed.

^{Vaccination}
within 6 months
after birth.
30 & 31 Vict. c 84.

(2) The public vaccinator of the district shall, if the parent or other person having the custody of a child so requires, visit the home of the child for the purpose of vaccinating the child.

(3) If a child is not vaccinated within four months after its birth, the public vaccinator of the district, after at least twenty-four hours notice to the parent, shall visit the home of the child, and shall offer to vaccinate the child with glycerinated calf lymph, or such other lymph as may be issued by the Local Government Board,

(4) The public vaccinator shall not vaccinate a child if, in his opinion, the condition of the house in which it resides is such, or there is or has been such a recent prevalence of infectious disease in the district, that it cannot be safely vaccinated, and in that case shall give a certificate under section eighteen of the Vaccination Act of 1867 of postponement of vaccination, and shall forthwith give notice of any such certificate to the medical officer of health for the district.

(5) Notwithstanding any regulation of any lying-in hospital or infirmary, or other similar institution, the parent of any child born in any institution shall not be compelled under such regulation or otherwise to cause or permit the child to be vaccinated at any time earlier than the expiration of six months from its birth.

**Exemption
from penalties.**

2.—(1) No parent or other person shall be liable to any penalty under section twenty-nine or section thirty-one of the Vaccination Act of 1867, if within four months from the birth of the child he satisfies two justices, or a stipendiary or metropolitan police magistrate, in petty sessions, that he conscientiously believes that vaccination would be prejudicial to the health of the child, and within seven days thereafter delivers to the vaccination officer for the district a certificate by such justices or magistrate of such conscientious objection.

(2) This section shall come into operation on the passing of this Act, but in its application to a child born before the passing of this Act there shall be substituted for the period of four months from the

birth of the child the period of four months from the passing of this Act.

3. An order under section thirty-one of the Vaccination Act of 1867, directing that a child be vaccinated, shall not be made on any person who has previously been convicted of non-compliance with a similar order relating to the same child.

Provision
against
repeated
penalties.

4. No proceedings under section thirty-one of the Vaccination Act of 1867 shall be taken against any parent or person who has been convicted under section twenty-nine of the said Act on account of the same child, until it has reached the age of four years.

Proceedings
under
30 & 31 Vict.
c. 84, s. 31.

5. Persons committed to prison on account of non-compliance with any order or non-payment of fines or costs under the Vaccination Acts shall be treated in the same way as first-class misdemeanants.

Treatment of
prisoners.

6. The Local Government Board may make rules and regulations with respect to the duties and remuneration of public vaccinators, whether under contracts made before or after the passing of this Act.

Regulations of
Local Government
Board.

7. The Local Government Board may by order, if in their opinion it is expedient by reason of serious risk of outbreak of small-pox or of other exceptional circumstances, require the guardians of any poor law union to provide vaccination stations for the vaccination of children with glycerinated calf lymph or such other lymph as may be issued by the Local Government Board, and modify as respects the area to which the order applies, and during the period for which it is in force, the provisions of this Act requiring the public vaccinator to visit the home of the

Power to provide
vaccination stations
under exceptional
circumstances.

child otherwise than on request of the parent.

List to be kept of vaccinated persons treated in small-pox hospitals.

8. The clerk of any sanitary authority which shall maintain a hospital for the treatment of small-pox patients shall keep a list of the names, addresses, ages, and condition as to vaccination of all small-pox patients treated in the hospital, such entries to be made on admission, and shall at all reasonable times allow searches to be made therein, and upon demand give a copy under his hand or under that of his deputy of every entry in the same on payment of a fee of sixpence for each search and threepence for each copy.

Repeal.

9. The enactments mentioned in the schedule to this Act are hereby repealed, during the continuance of this Act, to the extent specified in the third column of that schedule.

Extent, commencement, duration, and short title.

10.—(1) This Act shall not extend to Scotland or Ireland.

(2) This Act shall, except as by this Act specially provided, come into operation on the first day of January, one thousand eight hundred and ninety-nine, and shall remain in force until the first day of January, one thousand nine hundred and four.

30 & 31 Vict. c. 84.
35 & 36 Vict. c. 98.
37 & 38 Vict. c. 75.

(3) This Act may be cited as the Vaccination Act, 1898, and the Vaccination Act of 1867, the Vaccination Act, 1871, the Vaccination Act, 1874, and this Act shall be construed together as one Act, and may be cited collectively as the Vaccination Acts, 1867 to 1898.

This Act confirmed the concessions already suggested in the Fifth Report of the Royal Com-

mission, and also some others. Amongst these, it is significant that the age for vaccination was extended from three to six months, and that calf lymph was substituted for the humanised variety. This latter change was made, no doubt, in the hope of reducing the enormous permanent increase in the infantile death-rate from syphilis, which set in immediately after the first compulsory Vaccination Act of 1853, which both doubled the vaccinations and raised the death-rate of infants, from syphilis, by about 50 per cent. in the following year, 1854.

The passing of the Act of 1898 was received with comparative indifference in Leicester. At first very few cared to avail themselves of the "Conscience" Clause—as it was called. The immediate effect was, however, to cause the resignation of the Vaccination Officer, who, presumably, did not care to administer the law under the new conditions. On the whole, he had carried out his unpleasant (and oftentimes very difficult) duties in a fairly creditable manner, but he did not relish the transfer of authority from the Guardians to the Local Government Board. And who can be surprised?

CHAPTER LXIII.

THE ILLUSORY CONSCIENCE CLAUSE.

INSTEAD of accepting the recommendations of its own nominees on the Royal Commission, and abandoning compulsion, the Government merely gave the country an illusory Conscience Clause, which, in practice, so mocked the parents and discredited the Magistracy that, in 1907, yet another Act was passed, depriving Magistrates of any option as to granting exemption certificates. But devices such as these do not meet the just and equitable demands of anti-vaccinists. They insistently aver that the Vaccination Acts must be repealed, and that their resistance will not cease until vaccinated and unvaccinated are absolutely equal before the law.

The singular fact remains that the nearly 30,000 children for whom exemption certificates have been granted in Leicester are, in the eyes of the law, as much "protected" from small-pox as those who have been vaccinated. This also applies to the millions of children all through the country.

A yet more significant and striking fact is, that since the Act of 1898 very few, if any, instances of small-pox have been verified out of the millions of children for whom exemption has been legally obtained, or remain unvaccinated.

If there are any such cases, how is it the

Local Government Board have never made them public? Surely, from their point of view, it is just amongst this class that small-pox should occur. These children ought to have been decimated ere now, but up to the present (1912) no report has been published of the over-much prophesied and longed-for decimation by which they were to be swept away. Has it ever really been believed that exempted children would be decimated? If so, why does not the Local Government Board instruct Medical Officers of Health to keep a sharp lookout for these cases, and so once for all dumbfound the anti-vaccinists?

The absurdity of maintaining the law under such a condition of affairs must be apparent. If there is no need to insist on *all* children being vaccinated, there is no reason to insist upon any at all undergoing the operation. Clearly, if the vast army of exempted children are safe, all other children must of necessity be equally safe, even though unvaccinated! Of what use, then, is the law? To all intents and purposes, it might just as well be entirely repealed, and certainly, let the authorities do whatever they please, in Leicester itself, it will never again become operative.

It may be said that all objectors to vaccination should now avail themselves of the Conscience Clause, and obtain an exemption under the provisions of the Act of 1907. The exemption facilities are regarded here as compounding with conscience, and so have never been favoured in Leicester, as shown by the appended table, giving the discrepancy between exemptions and births:—

TABLE 24.

Year.	Births.	Registered Vaccinations (Public and Private).	Exemptions.
1899	6,273	156	167
1900	6,207	343	598
1901	6,169	357	500
1902	6,313	1,237	1,500
1903	6,018	2,487	1,029
1904	5,981	1,232	1,044
1905	5,888	987	1,112
1906	5,865	1,073	1,080
1907	5,594	1,093	1,255
1908	5,680	659	2,401
1909	5,431	660	2,367
1910	5,380	564	2,335
1911	5,222	475	2,964
Totals	75,961	11,323	18,353

It will thus be seen that over the whole period of thirteen years, 1899-1911 inclusive, the vaccinations in Leicester have only averaged 15 per cent. of the births, and the exemptions 24 per cent., which leaves a balance of 61 per cent. of the children born for whom no exemption has been claimed, but who, nevertheless, remain unvaccinated.

In the year 1898, no fewer than 11,327 exemption certificates were applied for, but only 9,885 were delivered to the Vaccination Officer up to 31st December, the date of his resignation, the others being delivered when the office became vacant. As practically all these related to births in previous years, they do not affect the proportions in Table 24.

CHAPTER LXIV.

LEICESTER GUARDIANS AND THE LOCAL GOVERNMENT BOARD.

ON the retirement, in 1899, of the veteran Vaccination Officer of Leicester, Mr. W. H. Maskell, who had held the office since 1868, it became the duty of the Guardians to appoint another official in his stead. The Local Government Board, on the strength of the 1867 Act and of their own Order in 1898, set up the preposterous claim that the Vaccination Officer could prosecute either on his own initiative, without the authority of the Guardians, or on the direct instructions of the Local Government Board. This pretended and non-existent power is a serious menace to local self-government, and ought to be suppressed.

Being confronted by this extravagant and hitherto unheard-of assumption, setting both the Local Government Board and the Vaccination Officer above the law, the Guardians were naturally reluctant to appoint an Officer over whom they had no control, but whose salary they were, nevertheless, called upon to pay, and whose odious duty it was to prosecute the electors whom they represented, and had declared they would shield from prosecution.

The Guardians reasonably contended that if

the Local Government Board possessed the power they claimed for the Vaccination Officer, it was in their province to appoint, instead of the Guardians.

There was a small minority on the Board in favour of appointing a Vaccination Officer, but a large majority were opposed to it. The fight continued until the opposing members were eventually served with a writ of attachment from the High Courts of Justice.

From the beginning of 1899, a continuous correspondence was kept up between the Guardians and the Local Government Board. A Vaccination Committee was appointed by the Guardians, and a Memorial on the subject was drawn up and forwarded on 2nd May to the Local Government Board.

MEMORIAL OF THE
GUARDIANS OF THE POOR OF THE PARISH OF
LEICESTER,
RE VACCINATION.

TO THE HONOURABLE THE LOCAL GOVERNMENT BOARD.

The Guardians of the Parish of Leicester have, since the resignation of the Vaccination Officer in December last, had under their consideration the appointment of a successor, and they think it expedient to state their views fully to your Honourable Board.

The position of Leicester in regard to vaccination is widely known, but the actual statistics and facts relating to the town are probably not so fully impressed upon the public mind, and may not have entirely come under the cognisance of your Honourable Board. Therefore, in the opinion of the Guardians, it is desirable at this juncture to refer to some extent to these matters in detail.

No Guardians in the United Kingdom have in the past

endeavoured to carry out the Vaccination Acts with greater zeal, energy, and determination than the Leicester Board. Although the appointment of a Vaccination Officer by Boards of Guardians was not made obligatory until 1871, the Leicester Guardians had already appointed one as early as 1868, and prosecutions under the Act of 1867 actually commenced the same year. The Guardians utilised every opportunity afforded by successive Acts of Parliament to enforce the law, and continued their prosecuting policy until by 1886 no fewer than between 6,000 and 7,000 parents had been summoned and brought before the Magistrates. Sixty-four of these parents were imprisoned, suffering terms of imprisonment ranging from seven to thirty days; 193 distress warrants upon household goods were issued and carried out with great difficulty to the authorities, with rioting and disturbance; while no less a sum than upwards of £2,388 was paid in fines and costs by the persons proceeded against, and the loss of their time attending the courts would more than equal this amount. Amongst those who were prosecuted were ministers of religion, medical men, members of the Town Council and Board of Guardians, schoolmasters, and, indeed, persons in almost every position of life.

But this prosecution—almost amounting to persecution—of their fellow-townpeople by the Guardians did not secure the vaccination of the population. On the contrary, the registered vaccinations declined from 4,456 in 1872 to only 471 in 1887, notwithstanding that the births had increased by nearly 1,000 annually during the same period. Nothing could be more obvious, therefore, than that prosecutions have not promoted vaccination, which, the Guardians presume, is the object of the vaccination laws.

The Guardians also desire to point out that the abstentions from vaccination have occurred and continued notwithstanding the fact that notice B, threatening proceedings before the Magistrates, has been issued in every instance.

Meanwhile vaccination became an electoral question,

and, at every election since 1883, successive Boards have been elected with overwhelming majorities pledged against compulsory vaccination, and the present Board is practically unanimous against prosecuting under the Vaccination Acts. In the opinion of the Guardians, no statesman of wisdom would, without due consideration, require or advocate wholesale prosecution, with consequential disturbance of the public peace and the stirring up of rancour, bitterness, and hatred of the governing powers which must necessarily ensue.

The Guardians think there might be some justification if the health of the town had deteriorated in consequence of non-vaccination. But the contrary is the case. Not only has the general death-rate declined from 27 per 1,000 in 1872, with vaccination in full force, to only about 17 per 1,000 for the past ten years, with but 1 or 2 per cent. of vaccination; but what is more striking, the death-rate of young children has declined enormously since compulsory vaccination ceased. Still more significant, there has been very little small-pox in Leicester since vaccination has been abandoned, and the deaths from zymotic diseases have shown a remarkable decrease. Whatever small-pox has occurred in Leicester for many years past has usually been imported, and always by vaccinated persons from well-vaccinated districts. The Guardians think these facts should be more widely known.

During the debates in Parliament in 1898, and since the passing of the Vaccination Act, various opinions have been expressed as to the exact relation of Guardians not only to the Vaccination Acts, but also as to the relative position of the Guardians and their vaccination officers. As the new Act makes no difference in these respects, it is difficult to know how the suggestions in the new Order harmonise with statute law. These matters require clearing up.

Even the discretionary powers exercised by Guardians for nearly thirty years are now called in question. Those powers have been exercised not only with the sanction but also with the approval, and even at the suggestion, of your Honourable Board.

On 17th September, 1875, your Honourable Board issued a letter to the Guardians of the Evesham Union wherein the following words occur:—"The Board entertain no doubt that, in all cases of the kind in question, the Guardians, having before them the preceding observations, will not fail to exercise the discretionary powers confided to them in the manner best calculated to give effect to the policy of the law."

The policy thus indicated has been fully adopted by the Leicester Guardians. Although this letter has repeatedly and even recently been urged upon Guardians as the course to follow, it is now affirmed that the discretionary power of Boards of Guardians is to cease. The President of the Local Government Board (Mr. H. Chaplin) is reported to have said on 19th April, 1898:—1898.

"If at the end of twelve months children were not vaccinated, their parents would be liable to prosecution, to be instituted by the Vaccination Officer without regard to the wishes of the Board of Guardians."

Mr. Ritchie, a former President of the Local Government Board, stated in the House of Commons, 17th February, 1888, in reference to the General Order of 31st October, 1874, that it "was not binding on Boards of Guardians; the Order was merely a communication, and it rested entirely with Boards of Guardians to exercise their discretion in the matter."

Also in regard to vaccination prosecutions Mr. Ritchie, when President of the Local Government Board, said on the 5th July, 1888, that the Local Government Board "could not interfere in the exercise by the Guardians of their powers," and that "the enforcement of the Vaccination Act is committed to an elective tribunal, and they must use their discretion in the cases that came before them."

The Bill of 1898 does not alter the law in this respect, nor does it confer upon the Local Government Board the authority to alter or alienate this discretionary power which the Guardians have exercised for thirty years. There appears, therefore, to the Leicester Guardians, no statutory reason why it should not continue. If this

power lapses, in what way does it lapse? The Guardians are of opinion that a jurisdiction exercised under the sanction and at the suggestion of your Honourable Board for nearly thirty years should have established it beyond question, and that so long and uninterrupted a practice and custom, venerable with age, should practically give it statutory force unless distinctly repealed by an Act of Parliament. Whatever powers the Guardians exercised before the Act of 1898 they can exercise now, and if the new Order of your Honourable Board introduces a different state of things, it must be outside or contrary to statute law.

During the debates in Parliament on the Bill of 1898, the President of the Local Government Board (Mr. H. Chaplin) said :—

“I am compelled to recognise that the administration of a law for compulsory vaccination would be absolutely impracticable in the future. No Government and no Minister, in face of that opinion, would be able to enforce it.” And again :—“Since the debate of last night I have quite recognised the fact that the administration of a compulsory vaccination law would be neither necessary nor desirable.”

The Right Honourable A. J. Balfour, M.P., said :—

“We are practically agreed that when a parent has clearly proved that he has an honest, decided, and strong objection in the interests of his own child to vaccination, it is useless to attempt to coerce him,” etc. Mr. Balfour further said :—“If the blood of the martyrs is the seed of the Church, the fines of the anti-vaccinator are the seed of the unfortunate propaganda against vaccination. . . . It is an excessively difficult matter to drive the English people along paths they are reluctant to travel. . . . It is beyond the power of practical legislation. . . . Laws to which you attach so much value have been in a large measure dead letters. They have been disobeyed, and disobeyed with impunity, by the local authorities. . . . and my right hon. friend who has moved this amendment . . . is, I am sure, too well acquainted with the limits of possi-

"bility and impossibility to suppose that anything this House can do will give them power to coerce the local authorities. It never has been done, and it cannot be done, when strong and bitter feelings have once been aroused."

The Prime Minister, Lord Salisbury, expressed himself in similar terms, adding the motive:—

"You will be able to induce the local authorities to work with you instead of against you."

If the appointment of a Vaccination Officer means that the Local Government Board intend to institute proceedings against vaccination defaulters over the heads of the Guardians, and to attempt to enforce vaccination upon an unwilling community, what is the meaning of the foregoing declarations?

The vaccination returns presented to the Leicester Guardians on 7th February, 1899, showed that only 94 vaccinations, both public and private, had been performed out of 9,411 births during a period of 18 months, ended 30th June, 1898. The Guardians put it to your Honourable Board whether it will not be an absurdity to appoint a Vaccination Officer at considerable annual cost to register a fraction over one vaccination per week, a duty which would not overburden any of the present officers of the Guardians if added to their existing duties.

The "concessions," as they are called, of the Vaccination Act of 1898—namely, the option of using "calf lymph" and the "exemption" clause—are practically inoperative in Leicester. "Calf lymph," and indeed any kind of lymph, is equally objectionable to the Leicester people. There were, last year, about 80,000 children in Leicester, whose parents were liable to prosecution under the Vaccination Acts, but out of this large number only 11,327 exemption certificates were applied for, and of these only 9,885 were completed by delivery to the Vaccination Officer, thus leaving about 70,000 unaccounted for. To attempt to prosecute the large number of parents involved would be a stupendous and obnoxious task foredoomed to failure. According to past experience, the Guardians

know it would not result in vaccination of the children, but would mean the imposition of fines, the issue of distress warrants, and, in some cases, the imprisonment of the parents. This would probably, as in the past, lead to rioting, disorder, and perhaps even to bloodshed; for the aversion of Leicester parents to vaccination is deeply rooted.

The Leicester Guardians have prosecuted more people than any other Board in the United Kingdom, but this policy has utterly failed. The Guardians are desirous of faithfully discharging their duties in accordance with the requirements of the law, but they are equally desirous to discharge their duty to those whom they represent. Above all, they are anxious to avoid a course which in their opinion will bring the law into contempt. Why disturb the existing peaceful state of things to introduce disorder, disturbance of the peace, and trouble to the authorities? Numerous prosecutions would undoubtedly excite widespread sympathy and indignation, thus bringing the administration of the law into contempt.

The Guardians respectfully submit this Memorial for the earnest consideration of your Honourable Board. They refrain from entering into the wider question of the principle of local self-government, which appears to be threatened and jeopardised. The questions submitted are, in the opinion of the Guardians, sufficiently serious to warrant the careful consideration of your Honourable Board both individually and collectively. The Guardians are opposed to prosecution; the Magistrates are averse to imposing penalties. The other public bodies in the town are in accord with the Guardians, and presented resolutions to this effect to the Royal Commission on Vaccination, and all regret that its unanimous recommendation to abolish compulsion was not adopted and embodied in the Act of 1898.

The Guardians are prepared to send a deputation to your Honourable Board to discuss the questions raised, or, if need arises, to appear at the Bar of the House of Commons itself in vindication of their position.

In witness whereof the common seal of the Guardians is hereto affixed this 2nd day of May, 1899.

SOLOMON SHAW, (L.S.)

Chairman of the Board.

HERBERT MANSFIELD,

Clerk to the Guardians.

This brought a reply on 30th May that consideration had been given to the representations in the Memorial, but as it was the duty of the Guardians to appoint a Vaccination Officer, "the Board must, therefore, call upon the Guardians forthwith to take the necessary steps for the purpose of discharging this duty."

Further correspondence ensued, and on 28th June the following letter was forwarded by the Guardians :—

MY LORDS AND GENTLEMEN,

I am directed by the Guardians to acknowledge the receipt of your Honourable Board's letter of the 30th of May last with regard to their Memorial, which summarised the position of Leicester on the vexed question of compulsory vaccination; also with respect to the appointment of a Vaccination Officer for the Parish of Leicester, and in reply thereto I am directed to state that the Guardians cannot refrain from respectfully expressing their view that the letter of your Honourable Board merely points out a duty imposed upon Guardians under vastly different conditions to those which prevail to-day, and that it is entirely inadequate and incomplete, as it omits any suggestion for the solution of the grave problems which are enumerated in the Memorial already referred to.

When the Vaccination Act, 1871, was passed, containing a section requiring Guardians to appoint a Vaccination Officer, the only section which rendered the prosecution of defaulters obligatory upon Guardians was Section 27

of the Vaccination Act, 1867, and that (by the 1871 Act) was absolutely repealed.

It is therefore obvious that Parliament intended to invest Boards of Guardians with the executive control of Vaccination Officers and vaccination prosecutions, otherwise Section 27 would not have been repealed.

This is not only emphasised by the concurrent embodiment of Section 5 of the Vaccination Act, 1871, with the repeal of Section 27 of the Vaccination Act, 1867, in the same Act of Parliament, but the practice has the sanction of your Honourable Board from 1871 down to a recent period, and since the decision in the case of *Bramble v. Lowe*.

Even early in the year 1898, in a letter addressed to the Reading Board of Guardians, the same principle was fully recognised, and, indeed, insisted upon by your Honourable Board.

The Guardians wish again to state that the Vaccination Act, 1898, makes no alteration in this respect, consequently, in their opinion, there is no statutory warrant for your Honourable Board to ignore this discretionary power, as would appear to be the intention of your Honourable Board's Order of 1898, and therefore any part of such Order which is outside the statute law is of no binding force.

From proceedings which are now taking place in various parts of the country it is apparent that, notwithstanding the assurance of the Government that compulsory vaccination has ceased, parents are still being fined and imprisoned under the Vaccination Acts.

Your Honourable Board's letter states that you have "no authority to relieve" the Guardians from the duty of appointing a Vaccination Officer. Neither have the Guardians any warrant or authority to relieve themselves from their solemn obligation to the people of Leicester.

The Guardians occupy their position by the free choice of a professedly free people, and are charged by their appointment with the responsibility of a definite mandate against the compulsory enforcement of vaccination.

In the opinion of the Guardians, their constituents possess the right and are entitled to the free exercise of their own judgment, and, having in a constitutional way by electoral control secured the position they at present occupy, the Guardians are unable to compromise that position, and betray the trust reposed in them by the electorate *by appointing an officer who by his will could institute prosecutions*, and who, under these circumstances and the special circumstances of Leicester, is either the instrument of compulsion or nothing.

To appoint an officer under these conditions (never contemplated by the Act of 1871) would be to become consenting parties to all that may follow.

There is a principle of vital importance involved reaching far deeper and beyond the question of vaccination, and if the course now being adopted towards Boards of Guardians is continued, the fundamental basis upon which representative local self-government rests will be jeopardised, if not destroyed.

The Guardians respectfully submit these further considerations to your Honourable Board in the hope that, after a reconsideration of the circumstances enumerated, reasonable and moderate counsels will prevail, and that it may also result in the issue of an amended or supplementary Order clearly defining the discretionary power of the Guardians conferred by statute as far back as 1871, and still remaining in undiminished force.

I have the honour to be,

My Lords and Gentlemen,

Your obedient Servant,

HERBERT MANSFIELD,
Clerk.

To the Local Government Board,
Whitehall, S.W.

Other correspondence followed.

CHAPTER LXV.

GUARDIANS AT THE HIGH COURTS OF JUSTICE.

ON 15th July, the Local Government Board applied to the High Court of Justice for a Mandamus to compel the Guardians to appoint a Vaccination Officer. The Guardians decided to oppose the application. It was thereupon

“ORDERED that Friday, the 28th day of July, instant, be peremptorily given to the Guardians of the Poor of the PARISH OF LEICESTER, in the County of Leicester, to show cause why a Writ of Mandamus should not issue directed to them commanding them to appoint a Vaccination Officer for the said PARISH, pursuant to the Statutes in that behalf.

“At the instance of the LOCAL GOVERNMENT BOARD.”

On the morning of the day named, 28th July, 1899, the Guardians had a tremendous send-off from the Midland Railway Station at Leicester, the approaches and platforms being occupied by enthusiastic crowds.

They were met at St. Pancras by a large number of sympathising friends, who accompanied them to the Courts.

Mr. Asquith and Mr. Corrie Grant appeared on behalf of the Board of Guardians; Mr. Schultess Young for Mr. O. B. Stanion; Mr. W.

Newbery, Miss Ellis, and the author appeared in person.

Sir R. B. Finlay (Solicitor-General) and Mr. H. Sutton appeared for the Local Government Board. (See "Vaccination Inquirer," 1st September, 1899, pages 66-68.)

Justices Darling and Phillimore presided at the Court, and after considerable argument on both sides, the first-mentioned delivered a characteristic oration—based on a practically obsolete Act of Parliament—which combined the maximum of bad law with the minimum of humanity, equity and justice. He concluded:—"The rule will be made absolute for a peremptory Writ of Mandamus."

MASS MEETING AT THE FLORAL HALL.

On the return of the Guardians from the High Court proceedings in London, a mass meeting was held the same evening in the Floral Hall, Leicester, over which Alderman Sir Israel Hart presided, and he was supported by a large number of the town's most influential residents.

The chairman said he was glad to preside over that meeting because he felt it was a very important and historical occasion. It was to resist the beginning of the interference with the principles of self-government, and he could not refrain from coming to support his fellow-townsmen and the members of the Board of Guardians in their effort to sustain those great principles which their forefathers had fought for, and won, and handed down to them.

Leicester had always been in the vanguard of reform, and they would stand to their old reputation.

Dr. (now Sir) William J. Collins met with a very hearty reception. He said that was the first time he had ever come to Leicester, and he regarded it as a most historical and eventful day. He knew something about vaccination, and he also knew something about local self-government. He touched upon the Royal Commission, the vaccination question, and, as a Londoner and a man who believed in liberty, he said he could assure them there were many Boards in London who were watching the action of the Leicester Guardians, and there would be a chorus of approval at the action taken that day.

Councillor Edwards moved :—"That this meeting desires to express its gratitude and admiration to the Leicester Board of Guardians for the position they have taken in reply to the overbearing attitude of the Local Government Board on the vaccination question, and for their courage and consistency in standing up for the principles of local self-government."

Councillor Flint, in seconding, said they must not forget that the Guardians were engaged in a conflict which was not of their own seeking, and those present desired to express their unbounded admiration of their courageous and consistent action.

The resolution having been put to the meeting, and carried unanimously, amidst a scene of wild enthusiasm, speeches were delivered by the

author and Mr. O. B. Stanion, following which Alderman A. Wakerley moved :—" That this representative meeting of the townspeople of Leicester, in welcoming the Guardians from London, desires to express its utmost confidence in their determination to fight for the right of local self-government until victory is assured."

This was seconded by Mr. F. W. Kemp, who said that if they continued the fight, they might be sure that right would win the day. This resolution was also carried without a dissentient voice or vote.

Mr. S. Shaw, the Chairman of the Guardians, next addressed the meeting. Mr. R. Cort, another member, proposed a vote of thanks to the chairman and to the lessee of the Floral Hall for allowing free use of that building.

Sir Israel Hart, in the course of his response, said it was not every man who had the privilege of presiding over such a gathering as this, which he hoped was a good augury for the future success of their cause.

Although the Floral Hall was a building which would hold 7,000 persons, it was not sufficiently large for the accommodation of all who wished to be present, and an overflow meeting was held outdoors in Humberstone-gate, Councillor Amos Booth being the principal speaker at these proceedings.

The appearance of the Guardians in the High Court, and also the subsequent public meeting, both formed the subjects of leading articles in the "Leicester Daily Post" of the following day

(29th July, 1899), and in the last-mentioned of these the Editor said:—"The crowded and "enthusiastic meeting in the Floral Hall last "evening, and the entire note of the speeches, "places one thing beyond doubt. 'Not only "is Leicester aroused,' as one anti-vaccinator "emphatically affirmed, but it has risen on a "larger and broader question than that of com- "pulsory vaccination. It is the great cardinal "and constitutional right of local self-government."

CHAPTER LXVI.

THE FAMOUS MANDAMUS.

THE famous and historical writ was issued on 19th September, worded as follows :—

VICTORIA, By the Grace of God, of the United Kingdom of Great Britain and Ireland, Queen, Defender of the Faith, to THE GUARDIANS OF THE POOR OF THE PARISH OF LEICESTER, in the County of Leicester, Greeting : WHEREAS by Section 3 of the Vaccination Act of 1871 it is provided that the said Act shall be construed as one with the Vaccination Act of 1867 (referred to in the said Act as “the principal Act”), and that both Acts may be cited together as “The Vaccination Acts, 1867 and 1871” : AND WHEREAS by Section 5 of the Vaccination Act, 1871, after reciting that under the principal Act the Guardians of any union or parish may pay any officer appointed by them to prosecute persons charged with offences against the Act, or otherwise to enforce its provisions, and that it is expedient to render obligatory the appointment of such an officer, it is enacted that the Guardians of every union and parish shall appoint and pay one or more of such officers (in the Act now in recital referred to as “Vaccination Officers”) : AND WHEREAS WE have been given to understand and to be informed in the Queen’s Bench Division of our High Court of Justice before US that on the thirty-first day of December now last past one William Henry Maskell, who thitherto had held the office of Vaccination Officer for the said Parish of Leicester, having been appointed thereto by you the Guardians of the said parish, went out of office, and that no appointment of any person to be a Vaccination Officer for the said parish in the place and stead of the said William Henry Maskell, who had so gone out of office

as aforesaid, has been made, whereby the said office of Vaccination Officer for the said parish since the said thirty-first day of December has been, and still is, vacant: AND WHEREAS WE have been given to understand and to be informed in the said Queen's Bench Division aforesaid, before US, that you, the said Guardians of the Poor of the said parish, have neglected and absolutely refused and still refuse to appoint a Vaccination Officer for the said parish, pursuant to the provisions of the Vaccination Acts, 1867 and 1871: AND WHEREAS WE have further been given to understand and to be informed in the Queen's Bench Division aforesaid before US, that the Local Government Board have expressly required you to comply with the provisions of the Vaccination Acts, 1867 and 1871, by appointing a Vaccination Officer for the said parish, and that notwithstanding such requirement you have absolutely refused and refuse so to do in contempt of US and to the great prejudice of the health and well-being of the inhabitants of the said parish, as we have been informed from the complaint made to US by the LOCAL GOVERNMENT BOARD in that behalf. WHEREUPON the LOCAL GOVERNMENT BOARD have humbly besought US that a fit and speedy remedy may be applied in this respect, and we being willing that due and speedy justice should be done in the premises, as it is reasonable, DO PEREMPTORILY COMMAND YOU, the said GUARDIANS OF THE POOR OF THE PARISH OF LEICESTER, IN THE COUNTY OF LEICESTER, firmly enjoining you that immediately after the receipt of this Our Writ you do appoint a Vaccination Officer for the said Parish of Leicester pursuant to the Vaccination Acts, 1867 and 1871, lest by your default the same complaint shall be repeated to US. And how you shall have executed this Our Writ, make known to US in our said Court, at the Royal Courts of Justice, London, forthwith, then returning to US this Our said Writ. And this you are not to omit. Witness, CHARLES, BARON RUSSELL OF KILLOWEN, at the Royal Courts of Justice, London, the nineteenth day of September, in the year of Our Lord, One thousand eight hundred and ninety-nine.

The writ not having been returned, a further Order was issued on 3rd October, reading thus :—

IT IS ORDERED that the Defendants do, within eight days next, after notice of this Order to be given to them, return this Peremptory Writ of Mandamus.

The Guardians continued obdurate, and on 21st November, an "Order Nisi for Writ of Attachment" was issued, embodied in the following words :—

WRIT OF ATTACHMENT.

UPON READING the affidavit of John Lithiby, and the several exhibits therein referred to, filed on the application for a writ of mandamus against the Guardians of the Poor of the Parish of Leicester, in the County of Leicester; the joint affidavit of Oliver Bown Stanion and another two of the said Guardians, filed on showing cause against the same; the Order of this Court made the 3rd day of October last, and the joint affidavit of William Scarff and four others, and the several exhibits therein referred to; the affidavit of Frank Rowley Parker and the affidavit of Linton Sidney Hartland, and a copy of the said Writ and the said Order of this Court, made the said 3rd day of October last, thereto annexed—

IT IS ORDERED that Friday, the 1st day of December next, be peremptorily given to John Freestone Barratt, John Thomas Biggs, Emily Caroline Bosworth, James Arthur Butler, Job Cobley, James Cocksedge, Richard Cort, Mary Foster Coy, Charlotte Ellis, Fanny Elizabeth Fullagar, Benjamin Grimes, Charles Harris, Robert William Harrison, William Hawkes, Dixon Gibbs Holland, William Howard, Robert Kempin, John Loseby, George Merrall, William Newbery, Thomas Parker, Solomon Shaw, Joseph Smedley, the said Oliver Bown Stanion, George While, and Marianne Willder, twenty-six of the Guardians of the Poor of the Parish of Leicester, in the County of Leicester, to show cause why a writ or writs of attachment should not issue against them or any of

them for their contempt in not obeying the peremptory writ of mandamus directed to the Guardians of the Poor of the Parish of Leicester in the County of Leicester, commanding the said Guardians to appoint a Vaccination Officer for the said parish pursuant to the statutes in that behalf, and for their contempt in preventing by their votes, as such Guardians, the Guardians from appointing such Vaccination Officer for the Parish of Leicester, and for their contempt in not making a return to the said writ, and in not returning the said writ, and in preventing by their votes the said Guardians from making a return to the said writ and from returning the same.

Upon notice of this Order to be given to the said John Freestone Barratt, John Thomas Biggs, Emily Caroline Bosworth, James Arthur Butler, Job Cobley, James Cocksedge, Richard Cort, Mary Foster Coy, Charlotte Ellis, Fanny Elizabeth Fullagar, Benjamin Grimes, Charles Harris, Robert William Harrison, William Hawkes, Dixon Gibbs Holland, William Howard, Robert Kempin, John Loseby, George Merrall, William Newbery, Thomas Parker, Solomon Shaw, Joseph Smedley, Oliver Bown Stanion, George While, and Marianne Willder in the meantime.

On the motion of Mr. Solicitor-General.

BY THE COURT.

Some idea of the magnitude of the fight may be gathered by the amount of the costs, which exceeded £1,400, and were discharged by public subscription, Members of Parliament being amongst those who subscribed to the special fund which was raised.

In the end, a Vaccination Officer was appointed by the abstention of those who opposed the appointment, one vote being cast against. Whatever may be said about the Guardians, it is certain that the authorities have not in the long run come out of the contest with much dignity.

A few sporadic summonses, directed annually by the Local Government Board, now constitute the apologia for maintaining what has become a despicable absurdity—viz., a Vaccination Officer independent of, but in the pay of, a Board of Guardians not only opposed to his appointment, but representing a population equally opposed, and also strongly antagonistic to the operation he is required, with all the machinery of the law, to enforce. The Vital Statistics of Leicester still further emphasise this irrational anachronism.

CHAPTER LXVII

CONFERENCE IN LEICESTER.

OWING to the acute position of the movement at Leicester, it was decided to hold the Autumn Conference of the National Anti-Vaccination League there in October. On the afternoon of 18th October, a preliminary Conference on the Rights of Local Self-Government was held in the Town Hall, and attended by a large number of delegates from all parts of the country. The Mayor, Alderman G. Clifton, J.P., gave the Conference a word of welcome at the opening of the proceedings, and Alderman S. Lennard, J.P., occupied the chair. Several important resolutions were adopted, and speeches were delivered by Mr. H. Broadhurst, M.P., Mr. W. Hazell, M.P., General Phelps (Birmingham), Rev. G. W. Keesey (London), Rev. D. Cox (Brixworth), Mr. E. L. Bourne (Nottingham), Mr. Bull (Walsall), Mr. John Brown (Mile End, London), Mr. A. Paul (St. Pancras), Rev. P. G. B. Lee (Rugby), Mr. W. L. Beurle (Hackney), Rev. C. Houghton (King's Lynn), Mr. J. A. Ceasar (Eastbourne), and others. ("Vaccination Inquirer," November, 1899, pages 90-108.)

In the evening, the Mayor and Mayoress (Dr. and Mrs. Clifton) gave a reception to the delegates and a number of representative townspeople.

A full account of the proceedings will be found in the "Vaccination Inquirer" for November, 1899, from which the following excerpts are taken :—

"On the following morning, 19th October, when the Conference opened, over one hundred delegates were present, and numerous local sympathisers—Lieut.-General Phelps (President) occupying the chair. Letters regretting inability to attend were read from the Earl of Darnley, Lord Grimthorpe, Lord Harberton, Professor Dr. Adolf Vogt (Berne, Switzerland), Alexander Wilder, M.D. (Newark, New Jersey, U.S.A.), Dr. Forster (Berlin), Dr. R. Cruewell (Berlin), Dr. Gavin B. Clark, M.P., Drs. Chas. Creighton, M.A., M.D., Geo. Cordwent, M.D. (Milverton, Somerset), Augustus Johnston, J.P., M.B., M.R.C.S., John H. Clark, M.D. (Clarges Street, W.), C. Fox, M.R.C.S. (Cardiff), Alfred Russel Wallace, LL.D., D.C.L., F.R.S., L. H. Peihn (Nora Springs, Iowa, U.S.A.), Hon. Auberon Herbert, Rev. Hugh Price Hughes, Messrs. J. A. Picton, M.P., John A. Bright, M.P., John W. Logan, M.P., W. C. Steadman, M.P., Thos. Burt, M.P., Jos. Arch, F. Maddison, M.P., F. A. Channing, M.P., W. Tebb, F. E. Rands (Ipswich), Professor C. Ruata, M.D. (Perugia, Italy).

"Papers were read on the following subjects :—
 "The Present and Future of the Conscience Clause' (Mr. Alfred Milnes, M.A., London),
 "and 'The Effect of the Vaccination Act of 1898' (Mr. John Brown, Mile End). The following

“ resolution was moved by Mr. Geo. Newinan
“ (Gloucester), seconded by Mr. Beurle, and
“ carried unanimously :—

“ ‘ That further experience of the working of
“ ‘ the Conscience Clause of the Vaccination Act,
“ ‘ 1898, does but strengthen the sense of its
“ ‘ unsatisfactory nature, and of the impossibility
“ ‘ of accepting it as any solution of the vac-
“ ‘ cination question ; and that this Conference
“ ‘ considers that the time has come for an
“ ‘ organised endeavour to secure special and
“ ‘ skilled representation of anti-vaccination views
“ ‘ in Parliament.’

“ Mr. Gilders moved, and Mr. J. H. Ceasar
“ seconded, the following resolution, which was
“ carried unanimously :—

“ ‘ That this meeting considers the Compulsory
“ ‘ Vaccination Acts, and the conduct of heads of
“ ‘ institutions and Government Departments in
“ ‘ insisting upon vaccination as a test of appoint-
“ ‘ ment, are opposed to the liberties and welfare
“ ‘ of the nation, and respectfully demands of
“ ‘ Parliament the total repeal of such legislation,
“ ‘ and the prohibition of such official practice.’

“ Many delegates took part in the discussions.

“ At the afternoon session, Mr. Alexander Paul
“ read a paper on ‘ The Local Government Board :
“ Its Past and Present Abuse of the Confidence
“ of Parliament and the Public.’ Dr. Haughton
“ also read a paper on ‘ The Causation of Small-
“ Pox Epidemics.’

“ Dr. M. R. Leverson (New York), Dr. W. R.

“Hadwen (Gloucester), Mr. W. G. Parriss, and
“many others took part in the discussions.

“In the evening one of the largest public
“meetings ever held in Leicester, on this or any
“other question, assembled in the Market-Place,
“where a huge marquee had been erected for the
“purpose. It seems that neither of the two
“public halls in the town was available for the
“evening, but, not to be beaten, the local Com-
“mittee obtained permission to put up a marquee,
“several hundred feet long, in the Market-Place.
“Some time before the hour announced for
“commencing the meeting, the accommodation
“of this monster canvas hall had been taxed to
“its utmost limits, and thousands were unable
“to get inside. In the interests of these, it was
“decided to hold overflow meetings at the Co-
“operative Hall, in High Street, and in Gallowtree
“Gate Chapel. These were addressed by several
“of the principal speakers, and proved altogether
“successful. Still a big crowd gathered outside
“the tent in the Market-Place, and ultimately it
“was decided to let down the flaps of the
“marquee all along one side, by which means
“the great meeting was at once augmented by
“something like an additional couple of thousand
“people, the audience altogether being roughly
“estimated at about five thousand. The most
“extraordinary enthusiasm prevailed from begin-
“ning to end of the meeting, the various speakers
“being greeted with ringing cheers, whilst the
“resolutions put to the vast assembly were carried
“as with one mighty voice. In the absence
“through illness of Alderman Wakerley, ex-Mayor

“of the town, Councillor J. T. Biggs, J.P., the
“recognised leader of the ‘majority’ on the
“Board of Guardians, presided, and among those
“supporting him on the platform were :—Mr.
“Henry Broadhurst, M.P., Mr. Walter Hazell,
“M.P. (the two Parliamentary representatives
“of the Borough), Dr. W. J. Collins, L.C.C.,
“Mr. Hopwood, Q.C. (Recorder of Liverpool),
“Mr. Alfred Milnes, M.A., Lieut.-General A.
“Phelps (President of the League), Mr. Charles
“Gane (Hon. Secretary), Dr. Hadwen (Gloucester),
“Mr. H. S. Schultess Young, M.A., Dr. Levenson
“(New York), Mr. Fred. G. Stevens (Local
“Secretary), and many others. A large body
“of the Leicester Guardians was also present,
“together with numerous representatives of other
“Poor Law Boards in the County.

“Dr. Collins, rising amid prolonged applause,
“moved the first resolution :—

“‘That the new instructions issued by the
“‘Local Government Board to Vaccination Officers,
“‘instructing them to take proceedings against
“‘defaulters under the Vaccination Acts without
“‘the direction of the Guardians, violate the
“‘principles of local self-government, and falsify
“‘the assurances given by the President of the
“‘Local Government Board (Mr. Chaplin) in his
“‘place in Parliament.’

“Lieut. - General Phelps, in seconding the
“resolution, said an apology had been made for
“holding their meeting in that tent, but if ever
“there was an occasion on which the old
“summons should go forth, ‘To your tents, O
“Israel,’ this was the one.

"The resolution was supported by Mr. Hopwood, Q.C., Recorder of Liverpool, and was then put and carried unanimously, amid great acclamation.

"Mr. Alfred Milnes then moved the following resolution :—

"That in the opinion of this meeting the recent changes in the Vaccination Acts are no satisfaction of the just claims to perfect freedom on the part of those who regard vaccination in itself as useless or dangerous. That this meeting condemns the breach of Parliamentary faith by which the Local Government Board has endeavoured to deprive the people of their right to exercise, within their duly elected local assemblies, the discretion as to vaccination conferred by the former law, and pledges itself by all legitimate means to support the Leicester Guardians in their struggle for the maintenance of the powers and privileges of local self-government, and to relax no effort until vaccinated and unvaccinated shall be wholly and absolutely equal before the law.' (Applause.)

"Mr. Walter Hazell, M.P., in seconding the resolution, said there was one distinguished man in connection with this movement who ought to have been there that evening; he referred to the Right Hon. Henry Chaplin! (Laughter.)

"Dr. W. R. Hadwen, of Gloucester, in supporting the resolution, observed that . . . 'The Local Government Board had entered into a

“ ‘contest with the elected representatives of the
“ ‘people. But the Local Government Board had
“ ‘better take care and learn its lesson before it
“ ‘went too far. . . . They were never going
“ ‘to rest until they had secured the disestablish-
“ ‘ment and the disendowment of the Vaccination
“ ‘Acts. . . . Pharaoh’s chariots may rattle in
“ ‘the distance, Pharaoh’s hosts may rage in their
“ ‘power and might, but the God of Israel is the
“ ‘God of to-day ; the Red Sea must be parted,
“ ‘and Liberty shall be ours.’ The resolution was
“ ‘carried unanimously. Mr. H. S. Young, Dr.
“ ‘Leverson, and others addressed the meeting.

“ ‘The following telegram was dispatched to
“ ‘Mr. Chaplin :—‘To the Right Hon. Henry
“ ‘Chaplin, House of Commons.—A mass meet-
“ ‘ing of many thousands of citizens, being held
“ ‘in the Market-Place, Leicester, to support
“ ‘the majority of the Guardians in refusing to
“ ‘appoint a Vaccination Officer, sends intimation
“ ‘of its unwavering determination to support its
“ ‘representatives, notwithstanding Mr. Chaplin
“ ‘and the Local Government Board.’ ”

CHAPTER LXVIII.

RENEWAL OF PROSECUTIONS.

THE answer of the Local Government Board to all these proceedings was an energetic renewal of the persecuting spirit of the past.

No proceedings of any kind, under the Vaccination Acts, were taken in Leicester from 1887 to 1901 inclusive, being a period of fifteen years ; but, after the proceedings in the High Court, prosecutions were renewed in 1901, by the direct instructions to the Vaccination Officer from the Local Government Board, independently of the Board of Guardians.

The renewal of prosecutions by the Local Government Board and the new Vaccination Officer were started in a spirited manner, but soon came to grief. When the prosecutions were announced, Sir John Rolleston, M.P., addressed questions on the subject to the President of the Local Government Board, in the House of Commons, on 2nd April, 1901, and obtained answer that the Vaccination Officer could prosecute defaulters without the authority or instructions of either the Guardians or the Local Government Board, but that, in this instance, the Local Government Board had, through one of its Inspectors, reminded the Vaccination Officer of his duty. The last-mentioned

gentleman, to make sure of his prey, engaged a solicitor (Mr. E. G. B. Fowler) to aid him in the prosecutions, whilst, on the other side, Mr. H. S. Schultess Young, a barrister well known all over the country as one of the most competent in his profession on the vaccination law, was retained for the defence. The proceedings took place on 3rd April, 1901.

Six cases had been selected out of many thousands of defaulters, but the prosecution failed ignominiously in every instance. Two cases were withdrawn even before the hearing was reached; the third summons was faulty in regard to date, but although Mr. Young allowed this to be amended, it was found that the Vaccination Officer had omitted to bring a copy of the Register, certified by the Registrar, as required by the Act of Parliament. In the fourth case the child was dead, and had been buried two months previously; and, in spite of the contention of the prosecuting solicitor that that did not matter, the Magistrates naturally came to the conclusion that it would be farcical to make the Order asked for to have the dead child vaccinated. An informality in the process caused the withdrawal of the two remaining cases, so the proceedings failed completely, much to the satisfaction of the local anti-vaccinators, and the corresponding discomfiture of the opposite party. Unfortunately, the money of the ratepayers was wasted upon these abortive attempts to renew the coercion of conscientious parents.

A public meeting was held the same evening, at which votes of thanks were passed to Sir

John Rolleston, M.P., for his kindness in putting questions in the House of Commons, and to Mr. Schultess Young for his able and successful conduct of the cases. Long press notices both preceded and succeeded these proceedings—which were generally condemned—especially by the local newspapers, the editors of which so well knew the situation. Periodically, since that time, prosecutions have continued, but have degenerated into an absolute farce, and, whilst a very small proportion of the defaulters pay the penalties inflicted upon them, it may be stated in general terms that the law is a dead letter so far as Leicester is concerned.

From 1901 to 1911, inclusive, a number of persons were proceeded against.

SUMMARY.

Orders applied for	- - - - -	392
Orders granted (with costs)	- - - - -	321
Number proceeded against for penalties	-	344
Persons fined	- - - - -	318
Number dismissed	- - - - -	26
Amount of fines and costs imposed (approximately)	- - - - -	£240
Number of distress warrants issued	- -	51
Number of distress warrants executed	-	0
Number of warrants of commitment to prison	- - - - -	10
Number of warrants of commitment to prison executed	- - - - -	2

Of the above-mentioned distress warrants, it will be noticed, none were given effect to.

From 1884 to 1901, a period of eighteen years, no commitment warrants were issued; but in 1902 there were six, and in 1904 four—a total of ten in all. Of these, only two operated, and these were against Mr. John H. Bonner, who went to prison on 25th March, 1904, on two commitments of seven days each, the terms running concurrently. Whether the demonstration on the occasion of his release from gaol has deterred the powers that be from arresting any other anti-vaccinator in Leicester since that time may be left for the reader to weigh up in his own mind.

But what a significant condition of things these facts reveal! There are actually 51 distress warrants and 8 commitment warrants—in all, 59 warrants—not executed, and not even intended to be proceeded with. What a preposterous farce! Where vaccination default is concerned, the King's Writ does not run in Leicester!

So it amounts to this:—The Local Government Board has imposed a Vaccination Officer on the Guardians; obliged them to pay his salary; instructed him to prosecute, independently of and contrary to the wishes of the Guardians; won the legal case where this power was challenged; again instructed the Vaccination Officer to prosecute; he successfully prosecutes, and defaulters are fined; the fines remain unpaid; distress warrants and commitment warrants are issued to terrify the recalcitrants; the said warrants rest harmlessly in the pigeon-holes of the police offices; the children remain unvaccinated; and there the matter ends! What a great and glori-

ous triumph for the Local Government Board!!! The Vaccination Acts are completely ignored, and are virtually repealed here in Leicester.

Why not repeal them altogether? The fact is, the authorities are heartily sick of the whole business, and would be glad and really delighted to be relieved entirely from the hateful and obnoxious duties imposed upon them by the Vaccination Acts.

PART VIII.

SANITATION versus VACCINATION.

CHAPTER LXIX.

MR. H. D. DUDGEON ON SANITATION.

THE fact that with less vaccination the town enjoyed better health, and the coincident decline of vaccination and small-pox, had great effect on the minds of the people of Leicester. Not small-pox alone, but the infantile death-rate, the whole of the zymotic diseases, and the general death-rate, all declined in a very marked degree, as vaccination was discarded, and as the tables and diagrams submitted to the Royal Commission and reproduced here indisputably prove. Thus, from being branded by the Registrar-General in his Annual Reports as one of the most unhealthy of England's large towns, Leicester—by no means advantageously situated geographically, and seriously handicapped by the large proportion of the artisan classes amongst its population—has become the healthiest of the principal manufacturing centres (even competing closely and successfully

with health resorts), thanks to well-considered, efficient, and properly executed sanitary measures, combined with the virtual cessation of vaccination.

From the outset, anti-vaccinators realised that Sanitation (in its broadest acceptation), and that alone, was capable of transforming the existing plague spots into healthy areas. They never ceased to press that view on the local authorities, both in season and out of season, but it took a long time to make an impression. Of late years, however, right nobly have the accountable authorities responded.

One of the very earliest writers on this subject was the late Mr. Henry Dalby Dudgeon, of Leicester, who resided for some time at Quorndon, in this county. He commenced his series of articles and letters to the press and other publications in 1852. He was not only an accomplished and perspicuous author, but also a profound student, and a linguist of no mean order. The measure of his ability to deal forcibly—and yet judiciously—with the thorny vaccination question, may be gauged by the fact that the very select and almost exclusive pages of the "Westminster Review" accepted a contribution from his pen in April, 1884. In the light of more recent developments, that recondite and authoritative article is well worth careful perusal. Long before our Sanitary administrators awoke to a sense of their responsibilities, Mr. Dudgeon, and other local anti-vaccinators, kept pressing forward the value of hygiene. The services he so ungrudgingly rendered to the movement (and thus to his fellow-men) can

never be adequately realised. His decease, although at a ripe old age, was a loss that was severely felt by the cause of Health for many years, but the seed he sowed has brought forth endless good fruit.

Our friendship was deep, and, personally, I felt his passing away very keenly indeed. Both he and his sister, Miss Louisa Dudgeon, who sympathetically assisted him with his work, did great, but withal unostentatious, public service, not only to the general health of the town, but also by the presentation of over 1,000 engravings and water-coloured drawings to its Art institutions. They were, indeed, kindred spirits, and lived together in harmonious companionship all their lives.

Mr. Dudgeon's article in the "Westminster Review," of April, 1884, on "Compulsory Vaccination," abounds with passages of forensic power, from which I have culled the appended specimens (pages 496-528) :—

"Researches into the past history of the race
"disclose a long vista of physical and moral evil,
"and the belief in their casual connection may
"be traced back to the earliest records of human
"suffering.

"Formerly 'the plague' in England, like 'la
"peste' in France, was a generic term applied to
"every severe visitation; in later times the pre-
"dominating zymotic has given the name to the
"epidemic. Let us not criticise with undue
"severity the older explanations of the rise and
"fall of epidemics, for their decline still presents

“formidable difficulties to the expert who maintains that each new sufferer is a centre of additional myriads of diffusible germs of the disease—a theory hardly consistent with the observation that the commencement of the decline is usually at the period of highest development and spread. Dr. Léon Colin has felt himself confronted with the difficulty: ‘The cessation of epidemics (he tells us) is at times as remarkable as their rise.’

“The modern hypothesis of a blind contagium guided by no law is in direct contradiction with fact. Lord Bacon has observed: ‘The plague is not easily received by such as are continually about them that have the plague, as keepers of the sick and physicians.’”

The remarkably strong character of the Emperor Napoleon is well exemplified by the next quotation which Mr. Dudgeon used from Dr. Antommarchi’s “Last Days of Napoleon”:—

“The plague appeared among Napoleon’s troops at Alexandria at the beginning of the present (i.e., the nineteenth) century. The doctors were afraid to attend the patients. The General, in anger, himself undertook the supervision. ‘Water, air, and cleanliness were the chief articles of my pharmacopœia. The doctors laughed at my method, but experience demonstrated that it was preferable to their pills. The city was the most dangerous post. I ordered the troops to encamp, and cut off all communication with the town, and the malady ceased.’”

After dealing with the plague, Mr. Dudgeon turned his attention to zymotic diseases—including small-pox—and their causes:—

“The opinion that small-pox will always make its appearance wherever insanitary practices and unhealthy surroundings exist in full strength has been stoutly combated by the discoverers of protectives. Yet those who investigate the ancient records of European municipalities which are being brought to light by antiquarian researches into their dusty abodes will find that many of our mediæval cities were filthy to the verge of indecency.

“The great family of the zymotic or epidemic diseases is bound together by ties of more intimate connection than is generally admitted.

“The romance which weaves itself around the events which history leaves obscure, and spreads over its hazy solutions of continuity an ideal glow of sentiment and poetic colouring, has always found a grateful field for development in displaying with agonising minuteness the devastations of pestilence in the insanitary cities of the Middle Ages.

“The scientific sagacity with which figures in the guise of statistics were manipulated in defence of the fashionable foible of inoculation may be illustrated by a quotation from page 78 of the ‘Annual Register’ of 1762:—‘If one person in seven dies of small-pox in the natural way, and one in 312 by inoculation, as proved at the Small-Pox Hospital, then the lives saved in a million by inoculation must be 139,652.

“The present generation, who have enjoyed all the advantages of inoculation, are inadequate judges of the extremely fatal prevalence of the original disease, and of their obligations to ‘Lady Mary Montagu.’ This was written in 1762. On page 399 of Vacc. Evid., a table gives the annual average small-pox mortality of London in 1681-90 as 3,139 per million of population, and in 1746-55 as 3,044 per million.”

Further on, Mr. Dudgeon alludes to inoculation. He quotes as follows from Dr. Buchan’s “Domestic Medicine” :—

“It is a matter of small consequence whether a disease be entirely extirpated or rendered so mild as neither to destroy life nor hurt the constitution ; but that this may be done by inoculation does not now admit of a doubt. The numbers who die under inoculation hardly deserve to be named. In the natural way, one in four or five generally dies, but by inoculation not one in a thousand. Nay, some can boast of having inoculated ten thousand without the loss of a single patient.. I have often wished to see some plan established for rendering this salutary practice universal. The aim is great : no less than saving the lives of one-fourth of mankind.

“Mr. James Moore, in 1813, expatiating on the superior advantages of vaccination, says :— ‘An exact calculation cannot be made of the proportion of deaths among those who were inoculated and skilfully treated, because the interest and vanity of medical men prompt

“ ‘them to exaggerate their success and to conceal
 “ ‘their failures. Even the reports of hospitals
 “ ‘cannot be relied on. Notwithstanding the pre-
 “ ‘valence of small-pox, great numbers escaped it
 “ ‘altogether.’ ”

After dealing with the transition from inoculation to vaccination, Mr. Dudgeon proceeded :—

“ ‘It is shown in the Vaccination Evidence of
 “ ‘1871, page 345, that Dimsdale estimated the
 “ ‘annual small-pox mortality of Russia at two
 “ ‘millions. But as the European mortality from
 “ ‘all causes in those days is supposed to have
 “ ‘been at least ten times as great as that from
 “ ‘small-pox, it is difficult to believe that the
 “ ‘annual deaths exceeded the annual births to
 “ ‘such an enormous extent. The estimate recalls
 “ ‘a gigantic exaggeration printed in the ‘Life of
 “ ‘Jenner,’ ii. 83 :—‘ One-third of the people of this
 “ ‘extensive empire (China), when the natural
 “ ‘small-pox is raging, are supposed to fall victims
 “ ‘to it.’ ”

“ ‘Professor Kussmaul, the great vaccinal
 “ ‘authority in Germany, says :—‘ Up to the present
 “ ‘time Science is unable to explain how the
 “ ‘vaccine protection is maintained in the system,’
 “ ‘and Dr. Stein, defending vaccination in the
 “ ‘Frankfurter Zeitung,’ says :—‘ We believe in
 “ ‘the utility of vaccine compulsion on the ground
 “ ‘of experience, and not on the ground of
 “ ‘scientific proof ; in no medical work is a
 “ ‘scientific foundation for vaccination to be dis-
 “ ‘covered.’ ”

“ ‘Dr. Lettsom, one of the fathers of vaccina-

tion, said in 1802 :—‘ Cow-pox produces but one
“ ‘small spot or pimple, and usually no more,’
“ and the single-mark theory derives further sup-
“ port from the address of a learned professor to
“ the British Medical Association, quoted in the
“ Report of the Officer of Health of Leicester for
“ 1870 :—‘ A minute cut is made in the skin, and
“ ‘an infinitesimal quantity of vaccine matter is
“ ‘inserted into the wound. Within a certain time
“ ‘a vesicle appears in the place of the wound,
“ ‘and the fluid which distends this vesicle is
“ ‘vaccine matter, in quantity a hundred or a
“ ‘thousand fold that which was originally
“ ‘inserted.’ ”

After some references to Leicester (1884), Mr. Dudgeon wrote :—“ In the last ten years, during
“ which vaccination has fallen so greatly in public
“ esteem, the average has been less than ten per
“ million ”—i.e., of deaths from small-pox.

Then Mr. Dudgeon observed :—“ The great
“ point at issue between the defenders and the
“ opponents of vaccination may be thus stated.
“ Has sanitation, in the sense of municipal and per-
“ sonal cleanliness, any practical influence on the
“ rise, spread, and fatality of the small-pox? The
“ statistics by which vaccination is supported are
“ based on the assumption that the answer to this
“ question will be in the negative. The opponents
“ of the practice hold that the influence of sanita-
“ tion is supreme, and that a person by being
“ vaccinated, and having thus received into his
“ system a virus of unknown power and duration,
“ may be fairly considered to be more and not
“ less likely to zymotic attack, whatever its form.

"Jenner's sanitary knowledge was of the most
 "shadowy character. He suffered from typhus
 "fever in 1786 and 1794, and on this latter occa-
 "sion the disease nearly proved fatal. In 1806 a
 "youth of sixteen was received into his house at
 "Berkeley. While there he was twice attacked
 "with typhus, and died of consumption in 1809.
 "During Jenner's stay in London, his two sons
 "fell ill of typhus, and the father, writing to the
 "Rev. John Clinch, says:—'I do not recollect
 "'ever seeing a case that arose from the vapour
 "'of putrid animal substances.'

"The origin of typhus in insanitary conditions
 "was evidently unknown to Jenner. That a
 "teacher so unconscious of the elementary laws
 "of sanitation should be able to compel the sub-
 "mission of posterity to the weight of his 'dead
 "hand'—that his crude speculations, his hypo-
 "thetical guesses, his reasonings from analogy,
 "should be imposed on the civilised world as
 "dogmas too sacred for criticism, is a peculiarity
 "of our time which will afford a wide field for
 "the satirists of future ages.

"One of the conclusions of the Health of
 "Towns Commission of 1842 says:—'The various
 "'forms of epidemic, endemic, and other disease,
 "'caused, aggravated, or propagated chiefly
 "'among the labouring classes by atmospheric
 "'impurities, produced by decomposing animal
 "'and vegetable substances, by damp and filth,
 "'and overcrowded dwellings, prevail amongst
 "'the population in every part of the kingdom.
 "'Where the removal of the noxious agency

“ ‘appears to be complete, such disease almost
“ ‘entirely disappears.’ ”

Dealing with the causes of small-pox, Mr. Dudgeon wrote :—

“ A century or more ago four great causes
“ of small-pox were in full vigour amongst
“ us—intramural burial, hospital mismanage-
“ ment, prison neglect, and lodging-houses for
“ the migratory population. These causes have
“ become nearly extinct, and the small-pox has
“ declined with their decline. Bishop Latimer
“ says :—‘ I do marvel that London hath not a
“ ‘burying-place without, for it is an unwhole-
“ ‘some thing to bury within the city. I think,
“ ‘verily, that many a man taketh his death in
“ ‘St. Paul’s Churchyard ; for I myself, when I
“ ‘have been there to hear the sermons, have felt
“ ‘such an ill-favoured unwholesome savour, that
“ ‘I was the worse for it a great while after.
“ ‘And I think it be the occasion of much disease.’ ”

“ Is it possible to admit that the abatement of
“ these hot-beds of disease, and the reduction in
“ the number of cellar dwellings, can have had
“ no influence in mitigating the small-pox ? Yet
“ such is the claim now made for vaccination.”

This masterly and scholarly article thus vindicates the cause of Liberty :—

“ The principle is boldly laid down that every
“ human law, good or bad, ought to be implicitly
“ obeyed. When this principle was pressed on
“ Antigone, she replied, ‘ Neither God nor Justice
“ sat in council at the making of those laws’ ;
“ and the noble army of martyrs to freedom,

“theological or scientific, have not always felt it
“their duty to be slaves.

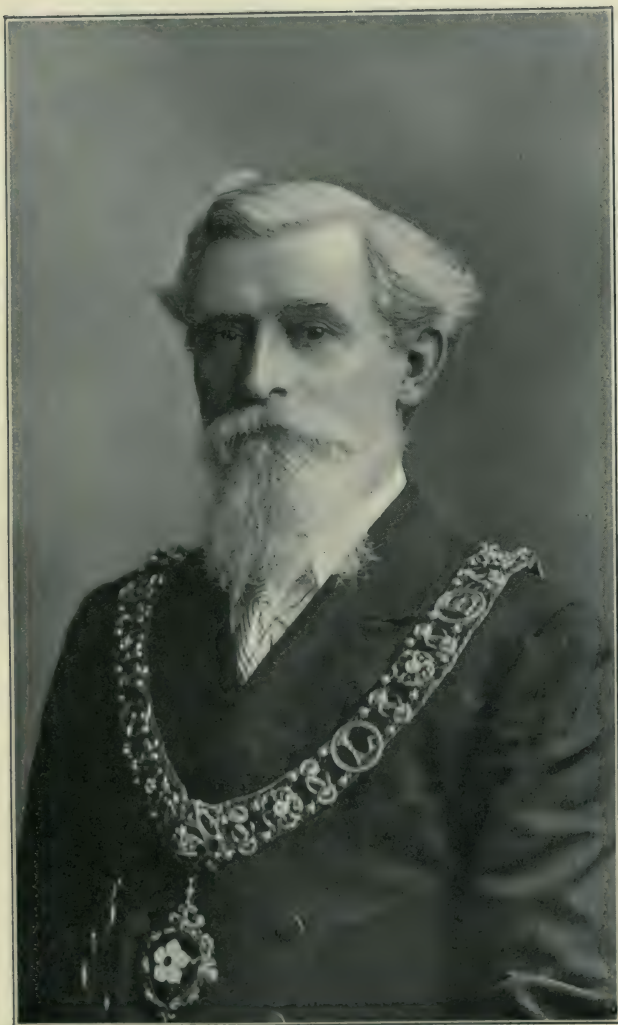
“Bishop Burnet rightly says:—‘The authority
“‘of parents over their children is antecedent to
“‘society, and no law that takes it away can be
“‘binding.’ In political struggles for place and
“power, the successful party for the time being
“becomes ‘the State.’ But it does not thereby
“become the repository of all theological and
“medical wisdom, entitled to override the indi-
“vidual conscience.

“The Vaccination Laws are incompatible with
“English feeling. For a temporary period the
“operation became popular with the lower classes,
“who underwent it in their desire to imitate
“their aristocratic superiors. It fell into con-
“tempt when forced upon paupers and felons.
“There is now widespread doubt and discussion,
“and free inquiry can no longer be suppressed
“by the fine, the distress warrant, and the jail.
“When the rulers of a proud nation cease to
“defend personal right, there is discontent and
“opposition and anger. The appeal of the
“independent thinker is for less State infalli-
“bility, and more individual freedom; and our
“governors will do well to revert to the wise
“maxim of antiquity—‘In matters doubtful, let
“liberty reign.’”

CHAPTER LXX.

THE CHAIRMAN OF THE LEICESTER SANITARY COMMITTEE AND THE PUBLIC HEALTH.

WITH the advent of Alderman Thomas Windley to the Chairmanship of the Sanitary Committee of the Leicester Town Council, the old, slothful ideas of hygiene were broken down, and a considerable step towards the ideal goal of public health was the outcome. His energetic and unswerving advocacy of every possible sanitary improvement, of the provision of public parks and public baths, and of all that tended to the amelioration of the insanitary conditions of life, will ever stand as a monument to his name. The fact—unique in Municipal history—that he has been elected for thirty-five years in succession to the Chairmanship of the Sanitary Committee, that he is an Alderman, a Magistrate, an Honorary Freeman, and has been twice Mayor of the Borough, is evidence of the esteem in which he is held, and the honours so worthily showered upon him furnish fitting and well-merited appreciation of his able work and lengthy services. He is a thorough-going sanitarian, but, although not an anti-vaccinator in the sense in which the description is usually applied, he is opposed to compulsion, and gave evidence before the Royal Commission on Vac-



ALD. THOMAS WINDLEY, J.P.

(Ex-Mayor, and Chairman of the Leicester Health Committee
for thirty-six years.)

ination. His enthusiasm for the work of superintending the means by which the physical welfare of the people is secured is as keen to-day as when he was first elected to preside over the deliberations of the Sanitary Committee—soon after the passing of the Public Health Act of 1875, which placed at the disposal of local authorities such magnificent machinery for the betterment of the lives of the people.

The following questions to, and answers by, Alderman Windley, when before the Royal Commission, which appear in the Fourth Report as part of his examination, can scarcely fail to be of interest:—

13,205. (Mr. Whitbread.) Then may I ask you what are your own views?—The views of the whole of the committee were strongly in favour of vaccination, and my own views too, for a very considerable period; and if they have varied now it is from the manner in which the medical profession have shifted their ground, and the failure of vaccination to protect the people.

13,206. Have you been vaccinated? — Yes; I was revaccinated at the last epidemic in 1871. I might, however, remark that our committee have adopted this practice (the isolation of contacts) apart from the question of vaccination altogether. It has been often suggested that the Sanitary Committee of Leicester were doing this as a committee of anti-vaccinators, whereas they were, as a committee, strongly in favour of vaccination. The majority of them are vaccinators now, but I should say that the majority are against compulsory vaccination. That would be my position. I am so far against vaccination myself as not to have had my last child vaccinated.

13,207. Do you think, from the position you occupy in Leicester, you can safely rely upon the system of isolation, such as that which you carry out, and abandon

vaccination altogether; do you consider you are safe?—I can only answer from my experience since we began in 1877. We have always succeeded during that time, and I do not see any reason why we should not succeed in the next dozen years as we have done in the last; nor do I see any reason why any other town should not succeed in the same way. Small-pox does not spring up spontaneously in a town; it comes from somewhere. We get timely notice of it when it breaks out, and I am looking to that as the best means of dealing with it when it breaks out. Many times medical men have written to me to say that every one of us who would favour anti-vaccination would be implicated in what might happen—and that would be a very terrible thing. We have had to work with that hanging over our heads, but, as I have said, we are acting entirely apart from anti-vaccination. We did this at the instigation of our Officer of Health, who was in favour of vaccination at the time, but I think he is now much more in favour of isolation. Isolation and other sanitary measures that we have adopted have secured us hitherto, and I do not see any reason to fear their not having the same beneficial effects hereafter. I would rather trust it than any other system.

13,208. (Sir Edwin Galsworthy.) If there should be an outbreak of small-pox in Leicester, should you have your child vaccinated?—I do not know that I should, unless we came near the seat of the disease. If there were any cases in the next house I might. I do not see any need for vaccination, except in cases such as that where you are liable to come into contact with the disease. I do not see the force of vaccinating all Leicester because there may be a tramp or wayfarer stricken with small-pox in the bottom of the town. I do not see why, on that ground, we should all be vaccinated when we have the patients sent away.

13,248. (The Chairman.) It . . . occurred to me that when you ceased to prosecute, people would not trouble themselves to send in the certificate of vaccination?—I think you will find from the Registrar that he

will be able to answer that question. The feeling against compulsion, I think, is universal; it is regarded as intolerable now, and I do not think that any efforts of any board or any authority—not even a regiment of soldiers—would bring about vaccination by compulsion again in Leicester. I cannot say, of course, what will happen, but I know that the profession have been expecting this dreadful epidemic to arise in Leicester, which was to have a great effect in alarming everybody, but it has not come.

13,261. (Dr. Collins.) What I wanted to know was whether you think, in view of the experience of Sheffield, a universal vaccination would be a valuable addition to your system?—I should like to see the universal disuse of vaccination and the universal adoption of the plan adopted in Leicester, because there is no possible danger in our plans, whereas there is a good deal of danger (of which I think evidence will be laid before you) in the other cases, plus the failures.

13,275. (Mr. Picton.) It is quite open to the inhabitants of Leicester to be vaccinated if they please?—Certainly; there are able vaccinators in Leicester.

13,281. You do not advocate any prohibition of vaccination?—I do not advocate its prohibition. I say let every man be persuaded in his own mind; but I say it is an intolerable thing to put a man in prison, or sell his goods and subject him in prison to hard labour. I have seen men come out of prison with their hands lacerated with the hard labour they have been exposed to.

CHAPTER LXXI.

LEICESTER MEDICAL OFFICERS OF HEALTH AND VACCINATION.

BEFORE THE INTRODUCTION OF THE "LEICESTER METHOD."

OUR Medical Officers of Health, and their opinions on Vaccination, Small-Pox, and the "Leicester Method," may now be considered. In this chapter I purpose dealing with those who held office prior to the introduction of the "Leicester Method."

DRS. BARCLAY AND BUCK—1846-53.

1846-53. Dr. Barclay and Dr. Buck were appointed the first Sanitary Medical Officers, in 1846, but on the Public Health Act of 1848 coming into force in 1849, Dr. Barclay resigned. Dr. Buck, however, did not devote his whole time to the work. Indeed, all our Medical Officers were private practitioners until 1885, when Dr. Tomkins was appointed to give his whole services to the office.

It is most curious reading to look back and see how the Medical Officers repeatedly contradicted themselves in their reports. First, they would point with confidence and glowing pride to the absolutely demonstrated protective value of

vaccination, only in a succeeding report to lament its failure, either on account of those "wicked anti-vaccinators," or from some other cause.

Dr. Buck, in what he calls his "second" report (1851), wrote a lengthy article, in which an important reference is made to the action of the Leicester Guardians. On page 5 he writes :—
 "Of the general disfavour in which all measures
 "of a sanitary class are held, we have ample
 "proof in the obstacles thrown in the way of the
 "successful working of the Vaccination Act; and
 "this is the more remarkable, since there is
 "probably no subject on which so many medical
 "and scientific persons are agreed than upon the
 "power of vaccination to prevent small-pox,
 "every successive year since its happy discovery
 "by the immortal Jenner tending only to confirm
 "the experience of the past, as to the unspeak-
 "able value of this precautionary measure.

"By the Bills of Mortality for London in the
 "last century, it appears that ten per cent. of the
 "whole deaths occurred from this disease, and
 "there is every reason to think that Leicester
 "enjoyed no particular exemption from this
 "pestilence. Yet when the Legislature declared
 "that the blessings of this sanitary enactment
 "should be made operative in every Union in the
 "Kingdom, we find that in 1842, considerably
 "more than two years after the passing of the
 "Act, the Board of Guardians, after frequent
 "deliberations, came to the conclusion that it
 "was 'inexpedient to carry out the provisions of
 "the Vaccination Act in Leicester'; and as a not

“unnatural consequence of thus dealing with the
“Vaccination Act, we find that in the year 1845
“small-pox appeared as an epidemic in the town,
“and in six months proved fatal to no less than
“41 individuals.”

CHAPTER LXXII.

DR. JOHN MOORE—1853-67.

1853. Dr. Buck resigned in June, 1853, and Dr. Moore was appointed his successor. Dr. Moore's views on vaccination were similar to those of his predecessor. In his first report, for 1853, the following paragraph appears on page 4:—"That scourge to the human race, small-pox, which in 1852 carried off 52 persons, has during the last year proved fatal in 11 cases only, all of which occurred in the early part of the year; and it is to be hoped that the recent Acts of the Legislature on the subject of vaccination will have an important effect in the prevention, mitigation, or extirpation of this disease."

1854. In his report for 1854, at page 4, he thus refers to small-pox:—"There were 52 deaths from this disease in 1852, and in the early part of the following year 11. I am happy, however, to state that since that period no fatal case has occurred. I attribute this immunity from the disease to the prompt way in which both the inhabitants and the district Medical Officers have carried out recent legislative measures with respect to vaccination."

1855. In the report for 1855, at page 7, he says:—"Another year has passed without the occurrence of a single case,"

1856. A much longer statement on small-pox appears at page 6 in the report for 1856, in which he says :—"For more than three years no instance of this disease has occurred to my knowledge within this Borough, but in August last it again made its appearance." (An unvaccinated child of vagrants, which died.) Further on he observes :—"The effectual manner in which vaccination is carried on in Leicester appears to have had a most salutary effect in preventing the extension of this direful disease."

1857. In the report for 1857, page 6, etc., Dr. Moore observes :—"This baneful disease, from which we had been almost exempt for the last four or five years, has, during the last half-year, become very prevalent. It has existed in almost every part of the town; and although there are no means of ascertaining the real number of cases, they must have been very great. It is, however, a source of some consolation to know that, up to 31st December, 1857, there had only been 17 deaths; and, after a diligent inquiry made into these cases, I find that in only one instance had the individual been vaccinated. This statement, in a sanitary point of view, is worthy of consideration, especially at the present time, going far to prove that, if vaccination does not entirely prevent small-pox, it so far modifies it, that of the few persons who have that disease afterwards, it is of comparatively rare occurrence for it to prove fatal." Apparently forgetting his observations in 1853, 1854, and 1856, he urges parents to have their children vaccinated, and the

authorities to enforce the Vaccination Acts. He informs us that his "opinion has been asked by "members of the Local Board, and by other "persons, as to the necessity of revaccination," and that the Sanitary Inspector had "made a diligent house-to-house inquiry" as to vaccination, and "this operation, he found, had very generally been performed." So that there was not much to complain of in this respect, but vaccination proved to be just as ineffectual then, as it is now.

1858. After this it is not surprising to find that Dr. Moore's next report is rather more cautious, and contains only the following meagre paragraph:—"In the year 1856 there was only one "death from this disease; in 1857 there were 17; "but last year they increased to 53: out of this "number 33 had not been vaccinated."

1859-61. Similar brief paragraphs appear for 1859 and 1860, recording 3 deaths in the former and 2 in the latter year. No mention whatever is made of small-pox in 1861, although one death occurred from that disease.

1862. In 1862 Dr. Moore again becomes more jubilant. He says:—"Our Borough has been "highly favoured by the absence of any great "mortality from this disease for many years. "During 1862 not a single death was recorded, "and in the three previous years altogether only "6. This disease has at several periods made "its appearance in Leicester, but has not com- "mitted such frightful ravages as it has done "in some other towns; this may fairly be

“attributable to the well-working of our vaccination system, and, in confirmation, it has been found that, whenever the disease has appeared in any locality, a house-to-house inquiry has proved that there were but very few cases of children who had not undergone vaccination.” (Page 4.)

1863. When he penned this, he little imagined how soon his faith in vaccination was to be shattered by the greatest epidemic of small-pox known up to that time in Leicester. The outbreak started in 1863, when five deaths occurred.

1864. The full storm did not burst until 1864. After years of laudation of vaccination, and triumphant references to the absence of small-pox, the Doctor writes:—“During the whole of the year we have had a severe visitation from small-pox, causing 104 deaths—a number far exceeding that of any former year.” (Page 4.) Instead of utilising this favourable opportunity of vindicating vaccination, all he says on the subject is:—“Out of the 104 deaths, 37 cases are reported as having been vaccinated, 29 as not vaccinated, and of the remainder no correct information could be obtained.” He then leaves vaccination severely alone, and proceeds to discuss the provision of a Small-Pox Hospital, and other measures of a remedial character to combat the disease. There could not well be a more abject abandonment of what the Doctor thought was an impregnable position.

1865. The Doctor's report on small-pox for 1865 indicates that he was tired of vaccination, and no doubt wished he could get rid of that and

small-pox together. His paragraph is worth quoting, because it brings in the incipient stages of a more reasonable treatment of the disease. He says:—"In the year 1864 there were 104 deaths from this disease, but in 1865 only 10, 8 of which occurred during the first quarter of the year. Recently there has been one death from this cause, at a common lodging-house. Every precaution was taken by the Sanitary authorities to prevent an extension of the disease, as to lime washing, etc., and by closing the lodging-houses for a time against the admission of lodgers; and up to the present period no fresh case has occurred." (Page 6.)

1866. All Dr. Moore said in 1866 was that:—"Only three deaths have occurred from small-pox." (Page 6.) The provision of a Disinfecting Chamber is recorded. He proceeds:—"A plentiful supply of pure water is one of the sanitary measures most required in the prevention of cholera, as well as in all other zymotic diseases; and . . . according to the purity or impurity of the water has been to a great extent the amount of disease." (Page 11.) The word vaccination is not to be found in the report. Dr. Moore died in 1867, and the report for that year was written by his successor.

CHAPTER LXXIII.

J. WYATT CRANE, M.D.—1867-79.

1867. Dr. Crane was appointed Medical Officer of Health in 1867, and wrote a report more voluminous than any of his predecessors. In it he says :—"There were only 2 deaths from small-pox in 1867; but in 1864 the deaths amounted to 104. We should, therefore, attend sedulously to vaccination, and not relax our vigilance in preparing for an outbreak of this disease; and as it is prevalent in many parts of the country at this time (particularly at Woolwich, where it is estimated that 400 cases have occurred in four months), it would, I think, be a prudent precaution to take measures beforehand for isolating any important case, should such unfortunately occur. . . . It is only by such means that the future extension of the disease can be prevented or checked." (Page 8.) It would have been well for Dr. Crane's reputation if he had kept to the immediate removal and isolation referred to in this paragraph.

1868. He opens his report for 1868 with the ominous words :—"I regret to have to announce to you a considerable increase in the mortality of the year 1868, as compared with 1867, the total deaths in 1867 having been 2,119, and in 1868, 2,507." (Page 3.)

This was the first year of the fatal quin-

quennium when vaccination was forced upon the unfortunate children of Leicester, figuratively speaking, by "fire, faggot, and sword." There was only one death from small-pox, which is thus referred to:—"I may state, as a gratifying fact, that during the past year we have had only a single death from small-pox (a child of two months old). A few cases occurred in the town, but in those of which I heard every precaution was taken by the medical men in attendance, by vaccination of the unvaccinated, isolation as much as practicable, and proper ventilation and disinfectants, to prevent the spread of the disease, and their efforts were crowned with success. The deaths from small-pox during the past five years have been:—1864, 104; 1865, 10; 1866, 3; 1867, 2; 1868, 1. I think we may justly point to these facts as a proof of what vaccination has effected, in the almost complete extinction of this formidable disease; but although we may congratulate ourselves on the results which have been obtained, what we have gained is only to be maintained by a steady perseverance in the vaccination of the young children continually added to the population, for as many escape from absurd prejudices on the part of the parents; and as the new Compulsory Act has not yet been generally put in force, a nucleus of unprotected children is constantly increasing which may at some future time prove the fuel of a new epidemic."

1869. In the report for 1869, Dr. Crane observes:—"Annexed is a table of the mortality

"in every month of the year of the principal
 "diseases and orders. On inspection of the table,
 "it will be seen that there has not been a single
 "death from small-pox during the year. To those
 "who recollect the ravages that it caused, and
 "the alarm that its existence produced, this fact
 "will appear a legitimate subject of congratula-
 "tion; and I would ask those who decry
 "vaccination, to what other possible cause than
 "it they can attribute the cessation of the disease
 "among us. Of the reality of the blessing there
 "cannot be a doubt. . . . Let us then continue
 "perseveringly a system which experience has
 "proved to be so beneficial, and not be deterred
 "by fears which are entirely visionary; for if
 "the population were not continuously protected,
 "we should be incessantly exposed to a renewal
 "of the disease from persons contracting it in
 "other towns, and from its developing itself here.
 "I have heard, from the surgeons in attendance,
 "of two or three such cases occurring during the
 "year, but every precaution being taken by isola-
 "tion and vaccination, or revaccination when
 "necessary, the disease did not spread. That it
 "has not lost its old characters of extreme con-
 "tagiousness and virulence, and that the immunity
 "from its ravages, on which I am gratified to
 "have been able to congratulate you, is really
 "due to the precautions which I have mentioned,
 "there is abundant evidence to prove." (Pages
 9 and 10.) Dr. Crane's congratulations on the
 great "blessing" were soon to have a gruesome
 sequence.

1870. In 1870 Dr. Crane enters on a lengthy

dissertation upon "contagion." He quotes Sydenham, Trousseau, Dr. Murchison, and Professor Huxley's "admirable address" at the meeting of the British Medical Association, where he describes vaccination, and said that "the fluid which distends this vesicle is vaccine matter, in quantity a hundred or a thousand fold that which was originally inserted." (Page 6.) He cites Professor Chauveau and Dr. Sanderson, who, he says, "have succeeded in isolating and separating from vaccine lymph its contagious particles, the size of which does not exceed the 120,000 of an inch in diameter, and which are made visible by the microscope." (Page 7.)

He next alludes to the transport ship "Wellington," which sailed with troops for the Crimea in 1854. Small-pox broke out amongst these vaccinated troops, and the ship put back, and "was thoroughly cleansed in every part." Sailing for the Crimea some time after disinfection, the revaccinated troops were again attacked by small-pox; as were also the wounded on their homeward journey. The narration seems intended to prove that cleansing and sanitation are unavailing against small-pox. Next, the supposed origin of small-pox is referred to; how it found its way through Arabia, Syria, and Egypt, to the West, reaching England in the ninth century, and thence to Mexico, and the American continent, where it is said to have spread fearful ravages among the Indians. After this the Doctor prints a lengthy document on the efficacy of vaccination and revaccination, published by the

Royal College of Physicians, dated 7th February, 1871. (Pages 11, 12, and 13.)

He then says:—"Returning to ourselves, in
 "Leicester, I have again the satisfaction of
 "stating that not a single death from small-pox
 "has been recorded during the last year; but
 "you are aware that it prevails most extensively
 "in London, Liverpool, and other large towns.
 "We can scarcely hope, therefore, that our
 "immunity from its presence will be of very long
 "duration, the intercourse between these towns
 "and Leicester being so great. But I am happy
 "to be able to say that vaccination has been
 "sedulously attended to; and it is scarcely
 "necessary to impress upon parents the vital
 "importance of continuing the good work without
 "relaxation. It is a subject of great regret to
 "find that there are still individuals who are
 "blind to its necessity and fearful of pernicious
 "results from its adoption. I may, therefore,
 "repeat that, so far as my own experience goes,
 "I can state that I never saw such effects."
 (Page 13.)

1871. In this year there is another long tirade in favour of vaccination and against its opponents. Dr. Crane says:—"At the period of the publication of my last report, I had the gratification of
 "announcing that during the year 1870 there had
 "not been a single death from small-pox in
 "Leicester, although it was prevailing to a great
 "extent in London, Liverpool, and other towns,
 "and I ventured to anticipate that we could
 "scarcely hope to escape a visitation very long,
 "and in effect, at the latter end of April, three

"cases occurred, one of which terminated fatally
 "on the 5th of May. Steps had previously
 "been taken by the Board of Health for the
 "establishment of an hospital for the isolation
 "of future cases, into the history of which I
 "need not enter. . . . At the period of writing
 "this, I regret to say that the disease is so
 "extensively disseminated that I fear the utmost
 "that we can accomplish will be to moderate the
 "severity of the epidemic. . . . I wish I
 "could announce that the prejudices against vac-
 "cination, so unceasingly fostered by a certain
 "class, were diminishing, but this, I fear, is not
 "the case. I think it desirable not to relax in
 "the exposure of the fallacies that are so indus-
 "triously propagated, but by a reiteration of facts
 "to demonstrate how untenable they are, in the
 "hope that finally our opponents will allow
 "reason and judgment to decide the question
 "instead of imagination. I trust, therefore, that
 "no apology will be necessary for adding further
 "proofs to the evidence in my last report that
 "vaccination, in the great majority of cases, is
 "absolutely protective against an attack of small-
 "pox, and that where it does occur after vaccina-
 "tion, the disease is so modified as to disarm it
 "of its terrors, and that the true vaccine lymph
 "is incapable of producing any other disease.
 "One of the most common allegations in deprecia-
 "tion of vaccination is that many who have been
 "vaccinated take small-pox subsequently. It is
 "true they do so, but we have examples of the
 "recurrence of all eruptive diseases—scarlatina,
 "measles, and small-pox—and if an attack of

“small-pox does not protect the individual who has had it from a subsequent attack, I would ask whether it is reasonable to expect that vaccination should do so. Jenner’s opinion was that the protection afforded by an attack of small-pox was not greater than that afforded by a thorough and successful vaccination; that it was neither more or less, but exactly the same, and subsequent experience has confirmed his opinion. There are other causes also for the occasional inefficiency of vaccination, one of which is from the patient being insusceptible. . . . Another is from the inefficient performance of the operation, and this cause of failure, I am happy to say, is yearly becoming less frequent.” (Page 4, etc.)

1872. This was the principal year of the great epidemic, and, one would have thought, the very time to test the efficacy of vaccination. But what do we find? Not a single word either about vaccination or its success or failure. The humiliation of the Medical Officer and the failure of vaccination were so complete that vaccination is not even mentioned. I quote the whole of the report on small-pox for this year:—“The total number of deaths from small-pox is made up from the registered deaths, 314 (which include those that occurred in the old hospital in Friar’s Road), and from those also that occurred in the new hospital up to 31st December (32), which were not registered in the mortality returns of the Borough, the total number amounting to 346. Mr. Dalrymple has kindly furnished me also with the number of cases admitted into both

“hospitals. I am, therefore, in a position to
 “estimate the ratio of mortality to cases in them
 “up to 31st December, and I calculate that it has
 “been a fraction less than one death in eight
 “cases. On the hypothesis, then, that the
 “mortality in the houses of the town has been
 “the same (but in reality I believe that it has
 “been greater), the number of cases in the town
 “has amounted to 2,512, and adding to these
 “the cases in the hospital in Freake’s Ground,
 “the total number of cases of inhabitants of the
 “town who had small-pox, up to the 31st
 “December, will have been 3,297, or in the ratio
 “of 3.441 per 1,000 of the whole population.
 “Taking former experience as our guide, we may
 “indulge, I think, a well-grounded hope that five
 “or six years will at least elapse before another
 “epidemic of small-pox occurs in Leicester.”
 (Page 7, etc.)

Considering the opinions already expressed in previous reports, the last sentence could scarcely be excelled in richness of dry humour. From this time Dr. Crane’s reports became more brief.

1873-75. Two small-pox deaths occurred in 1873, none in 1874, but in 1875 there was one case of small-pox in a common lodging-house, the child of a tramp, and is not included in the statistics for the year by the Medical Officer of Health. The hospital was used for this case, and the family quarantined, and no other case occurred.

1876. No mention whatever is made of small-pox in this year’s report, but an epidemic of scarlet fever, which started in 1873 at the close

of the small-pox outbreak, is referred to, and I quote from the report because the argument is similar to that so frequently used in regard to small-pox. Speaking of scarlet fever, Dr. Crane says:—"At the period I am now writing, I am "happy to say that the number of deaths is "rapidly decreasing, and as so many children are "now protected by having had the disease, I "have every confidence that it will shortly cease "as an epidemic, and that we shall have a "temporary respite from its ravages until a new "generation arises among us." (Page 8.)

1877-84. Although Dr. Crane remained in office (until his resignation in 1880), Dr. William Johnston was, in effect, at this time Medical Officer. This year (1877) is of special historical importance, because of the introduction of the "Leicester Method," by the isolation and quarantining of small-pox contacts. Dr. Johnston is so closely identified with this subject that the extracts from his reports for 1877 to 1884 are incorporated in Part X., which is entirely devoted to the "Leicester Method."

CHAPTER LXXIV.

LEICESTER MEDICAL OFFICERS OF HEALTH AND VACCINATION.

AFTER THE INTRODUCTION OF THE "LEICESTER METHOD."

HENRY TOMKINS, M.D.—1885-92.

1885. Dr. Tomkins, who succeeded Dr. Johnston, was appointed, in 1885, as the first Medical Officer to devote the whole of his time to the work. No more ardent believer in vaccination ever lived, but his experience in Leicester moderated the ardour of his vaccinal advocacy. He started his first report (1885) with an attack on the Fever Hospital, which, erected hurriedly as a temporary building for the small-pox epidemic of 1871-73, is, he says, "an ugly makeshift." Defective as it undoubtedly was in construction, it did useful work, and Dr. Tomkins remarks:—"Nevertheless, with all its imperfections, the Borough Hospital has during the past year done good service." (Page 25.)

The Doctor starts at once on his vaccination campaign. He was grievously troubled about the large number of children unvaccinated. He says:—"The returns show that during the past year only 1842 children have been successfully vaccinated, so that, after all allowance has been made for deaths and removals, there must

"remain, at the lowest estimate, some 2,000
 "children born during the year who have received
 "none of the protection against small-pox which
 "this operation secures. . . . Since 1880, the
 "number of unvaccinated children has rapidly
 "increased, and at the present time the vaccina-
 "tion laws are in Leicester practically in abeyance.
 "Seeing that the objection to the operation is so
 "widespread in the town, it becomes a matter
 "for the serious consideration of those charged
 "with the carrying out of the law, whether it
 "would not be a wise procedure to encourage and
 "provide facilities for the use of animal lymph,
 "instead of that derived from the human sub-
 "ject, and thus try to meet some of the objections
 "of the opponents of vaccination." (Page 34.)
 It is interesting to note that Dr. Tomkins advo-
 cated "calf lymph" twenty-three years before its
 recommendation and adoption by the Government
 in the Act of 1898.

All the Doctor says about small-pox is that :—
 "No deaths occurred from this disease in the
 "year now under review. Eight cases only
 "came to the knowledge of the Health authori-
 "ties, and these all recovered under treatment at
 "hospital. The average annual number of deaths
 "for the past ten years has been 1.7." (Page 49.)

1886. In 1886 Dr. Tomkins returns to the vac-
 cination trouble, and says (page 47) :—"Only
 "1,122 children have been vaccinated during the
 "past year, being considerably less than 25 per
 "cent. of the children born. The opposition to
 "this operation is, in Leicester, more firmly
 "established than ever. At the last election of

"the Guardians (upon whom devolves the duty
 "of seeing the law relating thereto carried out)
 " . . . a majority was returned pledged not to
 "enforce the same, and the vaccination laws are
 "to-day in Leicester absolutely in abeyance. No
 "prosecutions are instituted against defaulters,
 "and no one who cares to neglect this pre-
 "cautionary measure in relation to his children's
 "safety has any pressure brought to bear upon
 "him in the matter. The sad feature about the
 "whole business is that it is the young children
 "of the town who are growing up in thousands
 "unprotected, and are running a risk to their
 "lives; they have but to come in contact with
 "the first breath of infection of small-pox to at
 "once contract this loathsome disorder."

After stating that the children "can hardly
 "expect to pass through life . . . without . . .
 "being brought into dangerous proximity to its
 "contagion," he says:—"When a person has
 "arrived at years of discretion, there is more
 "justification for neglecting the repetition of the
 "operation if he be so minded."

There was only one case of small-pox, which
 came from Sheffield or Nottingham. The oppor-
 tunity was too good for Dr. Tomkins to miss for
 supplying a proof of the advantage of revaccina-
 tion, as this paragraph shows (page 10):—"The
 "usual prompt measures were adopted. The
 "patient was removed to the small-pox wards,
 "and two other persons who had been in contact
 "with him were subjected to 14 days' quarantine,
 "and were revaccinated, both of whom escaped
 "the disease; the room he had occupied was

"thoroughly disinfected, and the bedding he had slept on destroyed. No other case occurred."

As so many others who had been quarantined in previous years had escaped infection without the supposed additional protection of either vaccination or revaccination, it is not unreasonable to conclude that "the usual prompt measures" had quite as much to do with the cessation of the outbreak as the two revaccinations, which are paraded so ostentatiously for the public gaze.

THE "LANCET" INVESTIGATES THE
"LEICESTER METHOD."

Dr. Tomkins then refers to the visit of the "Lancet" commissioner. He says:—"It may be interesting to observe that during the year one of the leading medical journals sent down a special commissioner to investigate the system adopted in Leicester whereby it was able, year after year, to keep free from small-pox. In this report (see 'Lancet,' 5th June, 1886) full justice is done to the thoroughness and promptitude with which the disease is grappled, though in common with all who have had much experience in dealing with it in epidemic form, it sounds a note of warning as to what may be in the future for a town the bulk of whose population is growing up practically unvaccinated."

1887. This was the first year of the notorious small-pox epidemic at Sheffield, and the subject of small-pox and vaccination covers many pages of the 1887 report. Dr. Tomkins, by reciting in detail the few Leicester cases, makes the most of

this opportunity to exalt vaccination and revaccination, and to show that unvaccinated cases suffered most. The small outbreak in Leicester, comprising a few cases only, excited keen interest in medical circles, and these were mainly responsible for that misrepresentation of which the Doctor complains. These extracts will suffice to give a general idea of the report (pages 13-16). Dr. Tomkins writes:—"The most noteworthy fact in connection with infectious disease during the year under review was a slight outbreak of small-pox, occurring in November last, which has attained much notoriety throughout the country, and concerning which much exaggeration and misstatements have been indulged in by misinformed writers in the public press and others. The facts, shortly stated, are as follows:—About the middle of November a boy . . . was attacked with a mild eruptive fever, which was thought by the medical man . . . to be chicken-pox; four other children in the house . . . caught it from him, the youngest . . . being a child four years of age. . . . The disease was then recognised as small-pox, and the whole of the patients were at once removed to hospital, whilst the father and mother and three other children were removed into the quarantine wards, where two of them . . . developed the disease. From these cases one other arose, on the other side of the town . . . a young man who had visited the family. . . . After diligent search and inquiry, the source of infection of this outbreak could not be satisfactorily

“ascertained. The father had been working in
 “Warwickshire, coming home periodically, . . .
 “and it is possible he may have unknowingly
 “brought the infection, without himself suffering
 “from the disease.”

Another case was “also promptly removed to
 “the Borough Hospital, and the patient’s family
 “taken into quarantine. No extension took place.
 “The disease in this case was undoubtedly con-
 “tracted at Sheffield.” Yet “another case was
 “reported, and the same measures were adopted—
 “prompt removal of the patient to hospital, of
 “his family to quarantine, and thorough and
 “efficient disinfection of all infected things and
 “rooms; and no extension of the disease”
 occurred. The Doctor proceeds:—“To those who
 “have carefully watched these sporadic cases
 “cropping up in various parts of the town, and
 “the means adopted to arrest their spread, it
 “is self-evident that prompt notification, and
 “removal of the patients and infected persons
 “from the midst of the community, have been
 “our mainstay against the extension of this
 “most infectious disorder; and no small credit
 “is due to the Inspectors, and especially Inspector
 “Braley, for his energy and aptitude in following
 “up and discovering every person known to
 “have been exposed to the infection. . . . Had
 “any such efficient system been in force at
 “Sheffield, it need not have been to-day suffering
 “from a widespread epidemic which has got
 “beyond all control. The exaggerated statements
 “and wild reports which have appeared in all
 “parts of the country with respect to the few

‘cases we have hitherto had, both as to the number of cases that have occurred and also as to the measures adopted, are calculated to excite amusement in the minds of Leicester inhabitants.’

It does not redound to the credit of the medical journals that while they tried their utmost to arouse a scare throughout the country against “unprotected” Leicester, which had only a few cases of small-pox in 1887 and 1888, and these traceable to Sheffield, they were practically silent about the 7,000 cases and nearly 700 deaths which occurred at efficiently-vaccinated Sheffield. Even Dr. Tomkins might well complain of such unfair misrepresentation.

After dealing with the vaccination statistics, which, in spite of all the uproar, showed only 474 children vaccinated during the year, he remarks (page 74):—“For the past two years all compulsion, or any attempt to carry out the vaccination laws, has been abandoned, and thus not only those persons who have a disbelief in the protection afforded by this operation against an attack from small-pox, or have any other conscientious objection to it, are amongst the defaulters, but also large numbers of that numerous class who, from sheer carelessness and thoughtless ignorance, neglect to protect their children from this loathsome disease. . . . In the course of eight or ten years from the present time, there will have accumulated a sufficient amount of ‘inflammable material’ to warrant the use of the term ‘Leicester experiment’ being applied to the

“town. Whether the present vigilant measures
 “of isolation and quarantine will suffice to suc-
 “cessfully deal with any outbreak of small-pox
 “which may then arise, time only can prove.
 “One thing is, however, certain, that any of
 “these unprotected children have but to be
 “brought in contact with a breath of infection
 “from small-pox, to almost inevitably contract
 “the disease.”

1888. Dealing with small-pox, Dr. Tomkins reports:—“Twenty-one cases of small-pox have
 “been met with in the town, a larger number
 “than in any year since 1882, when twenty-nine
 “cases occurred. . . . At the beginning of
 “the year small-pox existed in several parts
 “of the country, traceable in many instances
 “to Sheffield, whence some of our own cases
 “were derived. The disease declined as the year
 “progressed, so that at the end of 1888 the
 “country was almost entirely free from it. As
 “considerable interest attaches to Leicester, both
 “from its known anti-vaccination tendencies,
 “and from its almost unique method of combat-
 “ing the spread of small-pox when it appears
 “here, the following details of the cases that have
 “occurred may not be wearisome. In every
 “instance the patient was promptly removed to
 “hospital, and, where possible, those persons
 “known to have been exposed to infection were
 “isolated in quarantine wards. Thirty-nine were
 “thus dealt with, three of whom developed small-
 “pox whilst under observation there. Besides
 “these, fifteen men in the tramp wards at the
 “Workhouse were also kept for a fortnight in

"quarantine there." (Pages 12 to 17.) Details of the cases follow, with the usual observations favourable to vaccination.

He then concludes:—"The vaccination laws "are completely in abeyance, and, as a consequence, there are now being added yearly to "the population (after allowing for infantile "deaths) between three and four thousand unvaccinated children." (Page 63.)

1889. (Pages 15 and 91.) "Of small-pox not "a single case has been met with in the town "during the whole twelve months, as against "twenty-one during the previous year. . . . It "is scarcely to be expected that this good fortune "will continue uninterruptedly. . . . So clear "a record of this disease has not been experienced "since the year 1880."

1890 and 1891. No cases of small-pox occurred in these years, although several supposed cases in each year were reported. Dr. Tomkins says, in 1891:—"This is the third year in succession "that Leicester has been quite free from it." (Page 16.)

DR. JOSEPH PRIESTLEY, B.A. (Lond.),
M.D., D.P.H.—1892-95.

1892-94. Dr. Tomkins died, after a short illness, in 1892, Dr. Priestley being appointed Medical Officer. An epidemic of small-pox started the same year, and continued through 1893 to the beginning of 1894. The annual reports for these years—with my comments on the small-pox epidemic, 1892-94—are dealt with in Part IX., and are not reviewed here.

CHAPTER LXXV.

DR. H. G. H. MONK, M.R.C.S., D.P.H.
(Lond.)—1895-1900.

1895-1900. Dr. Priestley having resigned in 1895, Dr. Monk was appointed Medical Officer. No reference is made to small-pox in his report for 1895, but in 1896 the Doctor says:—"Two notifications were sent to the office as being suspicious cases of small-pox. On investigation, however, the patients were found to be suffering from some other complaints. A scare was raised in the town also with reference to a case of small-pox which was discovered in a neighbouring town, and which was supposed to be imported from Leicester. I investigated the facts carefully, and found that . . . he had undoubtedly contracted the disease before arriving in Leicester." (Page 11.) In 1897 no small-pox cases occurred, although "during the Gloucester epidemic the annual fair in Humberstone Gate was held, and several of the people who cater for the public with shows of various kinds came from that town to Leicester."

In 1898 the Doctor writes:—"No cases of this complaint were notified. Two suspicious cases were brought to my notice . . . but the patients eventually proved to be suffering from other diseases. There are several complaints which at times have a rash resembling small-

“pox; but one of the two mentioned above
“proved to be suffering from rheumatism, and
“I have only once before seen a ‘rheumatic
“rash’—if I may so call it—bear such a
“resemblance to small-pox.” (Page 12.)

There were no small-pox cases in 1898, but in regard to vaccination the Doctor says:—“For
“years past it has always been possible to give
“the totals of public and private vaccinations,
“but this year I am unable to give these
“numbers. In Leicester there is no Vaccination
“Officer, and certainly, if there was one, his
“duties, as far as keeping vaccination records,
“would be extremely light, as vaccination is
“almost a dead letter.” (Page 54.) The town
was also free from small-pox in 1899 and 1900,
although several “suspicious” cases were reported.

CHAPTER LXXVI.

DR. C. KILLICK MILLARD, M.D., D.Sc.—1901-10.

1901. Dr. Monk resigned on account of ill-health, and Dr. Millard was appointed Medical Officer. He held that office about five months before the close of the year. Writing on small-pox, he gives his first views on the "Leicester Method" and vaccination. He says:—

SMALL-POX.—"A slight outbreak of this disease occurred in April. The first two cases were Mormons, who happened to be staying in Leicester, and who had attended a conference at Nottingham a fortnight previously. . . . The Leicester cases gave rise to two others. All the four were at once removed to the hospital; had very slight attacks, and made good recoveries."

THE "LEICESTER SYSTEM."—"It may be well to add a word about what is often referred to as the 'Leicester System' of dealing with small-pox. It has frequently been said that there is nothing very extraordinary about the method adopted in Leicester to justify a distinctive title. This is only partly correct. The principal measures which are adopted in Leicester—immediate removal to hospital, disinfection, strict surveillance of all 'contacts,' etc., etc.—are, it is true, almost universally carried out

“NOW in other large towns. In addition, Leicester
 “has power, under a Local Act (Section 55,
 “Leicester Corporation Act, 1897), to pay com-
 “pensation to ‘contacts’ when it is thought
 “desirable to keep them from work. This pro-
 “vision is frequently very useful. But the
 “essential characteristic in the method of com-
 “bating small-pox in Leicester is the entire
 “absence of compulsory vaccination, which is
 “regarded as so all-important in most places.
 “. . . It may be truly said that compulsory
 “vaccination does not exist. The vast majority
 “of the children and young persons amongst the
 “masses are unvaccinated, and it is in this
 “respect that there is a radical difference between
 “Leicester and most other towns.” (Page 19.)

VACCINATION.—“I feel that it is desirable that
 “I should have a longer experience of the
 “working of the ‘Leicester System’ before
 “attempting to make any remarks upon the
 “thorny and much-debated question of vaccina-
 “tion. I readily admit that the ‘Leicester
 “Experiment’ has now been tried too long, and
 “been attended with too great success, for it to
 “be entirely ignored in considering the question
 “of the necessity for compulsory vaccination. At
 “the same time, nothing that I have seen so far
 “has in any way affected my belief that vaccina-
 “tion and revaccination, repeated when necessary,
 “will confer complete protection against small-
 “pox. Indeed, I regard this as not merely a
 “matter of belief, but as one capable of abso-
 “lute scientific demonstration.” (Page 19.)

Dr. Millard's views after several years' experi-

ence of the "Leicester Method" are fully quoted in the chapters devoted to this subject.

1902-04. A small-pox epidemic commenced in 1902, and continued through 1903 with a short break of a few days only until 1904. Extracts from the Medical Officer's reports for these years, with observations thereon, will be found in the chapters dealing with the small-pox epidemics.

1905. SMALL-POX. This disease was brought into the town, and through an error of diagnosis might have proved serious, but Dr. Millard says:—"The usual precautions were taken. . . . "No spread occurred from any of them, and all "made good recoveries." (Page 59.) . . . "Only "five cases of this disease were admitted to the "Small-Pox Hospital; they were all importations "from outside the Borough." (Page 123.)

On what he calls "the well-worn subject of "vaccination in relation to small-pox," Dr. Millard published further figures relating to small-pox in Leicester (1902-04). He says:—"The comparatively "slight difference between the incidence of the "disease on the vaccinated and unvaccinated "sections of the population is very remarkable, "though it is important to remember that in "Leicester the vaccinated section is composed "almost entirely of persons vaccinated many "years ago." (Pages 60 and 61.) "Whilst call- "ing attention to these figures, it is necessary, "in order to prevent the possibility of mis- "apprehension, to again assert my belief, amount- "ing to absolute conviction, in the efficacy of

“*recent vaccination in protecting the individual against small-pox.*” (Page 62.)

1906. From the report for 1906, the following extracts are taken:—“Only one case of this disease (small-pox) occurred during the year. . . . The source of infection was not discovered. . . . The patient made a good recovery. No spread of the disease occurred.” (Page 47.)

Writing on small-pox and vaccination, the Doctor says:—“On this ever-debatable subject there is little to add to what has been written in previous reports. As regards the question of compulsion, I have seen no reason to modify the views previously expressed. It would appear, indeed, that even in strong pro-vaccinist circles it is coming to be realised that the effect, from a public health point of view, of young children remaining unvaccinated is not quite so disastrous as was formerly believed. It is probable that the experience of Leicester and of other centres of anti-vaccination during the last epidemic has helped to bring about this more moderate attitude.

“A notable utterance in this connection was contained in a letter to the ‘Times’ (25th April, 1906), over the signatures of Mrs. Garrett Anderson, M.D. (Hon. Secretary, Imperial Vaccination League), and the Dean of Gloucester and Dr. Bond (President and Hon. Secretary of the Jenner Society). They stated that there was ‘a growing opinion that, in consequence of altered social conditions and improved sanitary

“ ‘administration, it is not absolutely necessary to
 “ ‘have infants of a few months old vaccinated
 “ ‘except in the presence of epidemic small-pox.’ ”
 (Page 47.) . . . “My absolute conviction as
 “ to the complete, though temporary, protection
 “ conferred by vaccination on the individual is
 “ sufficiently well known to enable me to write
 “ more freely than might otherwise be the case.”
 (Page 48.)

Speaking of compulsory vaccination, the Doctor says:—“Compulsion appears to answer in Germany, but England is not Germany. In this country compulsion as regards vaccination has admittedly been a failure, and it seems probable that, to quote the words of Dr. Priestley, ‘the days of compulsion in any shape or form are rapidly passing away.’ When compulsion has finally been abandoned, there is good reason to hope that much of the present hostility to vaccination will vanish with it.” (Page 49.)

1907. SMALL-POX.—“No cases occurred in Leicester.” (Page 25.) “With the advent of the year 1908, the New Vaccination Act comes into force, under which it is only necessary for the parent to make a statutory declaration of his objection to vaccination in order to be exempted from the necessity of having his child vaccinated. This is almost equivalent to the abolition of compulsory vaccination, but it is not likely to make much difference in the amount of vaccination performed in Leicester.” (Page 25.)

1908. SMALL-POX.—“No cases occurred in

"Leicester. At the time of writing (March,
 "1909), a slight outbreak of the disease has
 "occurred at Bristol, and there have been a
 "few cases elsewhere." (Page 25.) "Personally,
 "although believing in the efficacy of recent
 "vaccination as strongly as ever, I was forced to
 "the conclusion some years ago, as the result of
 "my experience of the behaviour of small-pox in
 "Leicester, that the neglect of infantile vaccina-
 "tion played a much smaller part in the spread
 "of the disease than was commonly believed.
 ". . . Experience of small-pox in Leicester
 "seems to show that it is essentially the adult
 "population which is the principal factor in
 "the spread of this disease; and for practical
 "purposes this section of the community is but
 "little more protected (so far as liability to attack
 "is concerned) in a well-vaccinated town than
 "in a badly-vaccinated one." (Page 26.) "Vac-
 "cinated persons, whose vaccination has "lapsed"
 "(and such persons constitute a majority in a
 "vaccinated community when vaccination in
 "infancy only is practised), may, therefore, con-
 "ceivably be as great a hindrance to the prompt
 "stamping out of small-pox as persons who have
 "never been vaccinated at all, and in whom,
 "when the disease does occur, the symptoms are
 "well marked and easily recognisable." (Page 27.)

1909. SMALL-POX. — "The disease did not
 "appear in Leicester, and it is now three years
 "since the last case was reported, and five years
 "since a death occurred. . . . As the experi-
 "ence of Leicester during the epidemics of 1903
 "and 1904 was very different from what had

“been expected by many people, and as it has
“an important bearing upon the vexed question
“of the necessity of compulsory vaccination, it
“may be well to quote the figures of the epidemics.

“In the 1903 epidemic there were 394 cases,
“with 21 deaths, yielding a case mortality of 5.3
“per cent.

“In the 1904 epidemic there were 321 cases,
“with 4 deaths, yielding a case mortality of only
“1.2 per cent.

“Several of our large cities suffered from more
“or less extensive epidemics about this period,
“but in none was such a low case mortality as
“1.2 per cent. recorded. In view of the large
“proportion of unvaccinated persons in Leicester,
“such a result is specially remarkable.” (Page 27.)

1910. “Another year has passed without any
“case of small-pox having occurred in Leicester.
“It is now four years since the small-pox
“hospital was last used, or five years if the
“single case in 1906 be excluded.” (Page 29.)
“As I have pointed out before, the experience
“of Leicester proves that the danger of unvac-
“cinated persons contracting small-pox, even in
“the presence of an epidemic—provided modern
“methods of dealing with the disease are
“efficiently carried out—has been somewhat over-
“rated; whilst the danger of vaccinated persons
“spreading the disease—through the occurrence
“of highly modified cases which are so apt to be
“‘missed’—has not hitherto been sufficiently
“emphasised. It is very doubtful, therefore,
“whether it is any longer legitimate to justify

“vaccination being made compulsory, on the ground—at one time so much insisted upon—that ‘unvaccinated persons are a danger to the community.’” (Pages 29 and 30.)

“Whilst saying this, I am as convinced as ever that persons who have been *recently* vaccinated are, for all practical purposes, *absolutely proof against small-pox*, and no matter how intimately they may be brought into contact with the disease, even to the extent of sleeping in the same bed with a person suffering from it, they will not contract it. It is, therefore, of the utmost value to doctors and nurses and others whose duties expose them to infection, and I should be sorry to have to fight an epidemic of small-pox unless the staff at my disposal were all protected by recent vaccination.” (Page 30.)

“The experience of Leicester in connection with small-pox and vaccination is to a great extent unique, and undoubtedly it calls for some revision of orthodox teaching. It has recently been attracting some attention in the United States, and lengthy articles on the subject have appeared in several American papers and journals. A number of communications on the subject have reached me from across the Atlantic.

“Nearer home, however, the experience of Leicester still appears to be ignored. A medical man, writing to a provincial paper a few months ago, deploring the subject of vaccination in his town, said :—‘So fearful am I of the consequences of allowing the accumulation of such a large

“‘amount of vulnerable material, in the shape of
 “‘so many unvaccinated children, that I would
 “‘fail in my duty to the public if I did not take
 “‘this opportunity of voicing the opinion that we
 “‘are preparing for a terrible day of reckoning—
 “‘that an awful nemesis will one day overtake
 “‘us.’ Only the other day another member of
 “the medical profession, quite unaware of our
 “past experience, suggested to the writer that it
 “only needed a single case of small-pox to be
 “introduced into the town to light up a fatal
 “epidemic.” (Page 30.)

“Another medical writer recently suggested that
 “the cost of dealing with small-pox in Leicester,
 “according to the “Leicester Method,” was so
 “heavy that it far outweighed the cost of
 “universal infantile vaccination. This, it need
 “hardly be said, is also quite contrary to the
 “past experience of the town.

“There would be no object in quoting these
 “expressions of opinion were it not that they
 “indicate a general misapprehension of facts
 “which undoubtedly must have a very practical
 “bearing upon the important question of the
 “necessity for compulsory vaccination.”

Dr. Millard publishes the following advertisement, culled from an old newspaper, dated 21st May, 1770 (and quoted in a recent issue of the “Times”), which reads very strangely to-day:—

AT THIS TIME

Gentlemen, Ladies, and Others, desirous of having the
 SMALL-POX, may be exceedingly well accommodated at
 a very good, large, and airy House, on Heathfield Down,

by Mr. and Mrs. Bursfield; Eighteen Days for One Guinea (Tea, Sugar, and Wine excepted), and longer if necessary, paying one shilling a day; and prepared, inoculated, and diligently attended, during the Distemper, by Thomas Baldock, Surgeon, at Burwash, for one guinea, common price.

N.B.—A better House and Situation, or more healthy air, is scarce to be found in the County; perhaps in the Kingdom. (Page 31.)

If Dr. Millard would start an establishment of this character on similar terms, but leaving inoculation and medical treatment optional, in accordance with his views, he would be assured of a numerous clientele. (Dr. Millard is still Medical Officer—1912.)

The Philosophy of Language

The philosophy of language is a branch of philosophy that studies the nature, structure, and use of language. It is concerned with the relationship between language and reality, and the ways in which language is used to communicate and think.

One of the central questions in the philosophy of language is the question of meaning. What does it mean to say something? What is the relationship between the words we use and the things they refer to?

Another central question is the question of truth. What makes a statement true or false? What is the relationship between truth and reality?

These are just a few of the questions that the philosophy of language seeks to answer. It is a complex and fascinating field that has shaped our understanding of language and thought.

The philosophy of language is also concerned with the ways in which language is used in different contexts. For example, how is language used in science? In law? In art?

These questions are all part of the philosophy of language, and they are all important. The philosophy of language is a field that is constantly evolving, and it is one that is essential to our understanding of the world.

The philosophy of language is a field that is both ancient and modern. It has been a central part of philosophy since the ancient Greeks, and it continues to be a central part of philosophy today.

The philosophy of language is a field that is both challenging and rewarding. It is a field that requires a deep understanding of language and thought, and it is a field that offers a unique perspective on the world.

PART IX.

LEICESTER SMALL-POX EPIDEMICS, 1892 - 94 and 1902 - 04.

CHAPTER LXXVII.

THE EPIDEMIC OF 1892 - 94.

DR. J. PRIESTLEY, M.O.H.

VERY soon after Dr. Joseph Priestley's appointment as Medical Officer in 1892, small-pox appeared in the town. The outbreak continued until 1894, and there was a total of 366 cases, with 21 deaths, a fatality-rate of only 5.7 per cent.

1892. Alluding to small-pox, Dr. Priestley says: — "Thirty-nine certificates have been received, but in one the diagnosis was found to be at fault. Towards the end of the year the cases assumed somewhat of an epidemic type, and up to the time of writing this report (March, 1893) there have been in all 140 cases and 10 deaths, six of the deaths occurring before the end of 1892." (Page 11.) "The details, whether from the point of view of the 'Leicester

“Method,’ the contagiousness of small-pox, or “vaccination, are interesting.” (Page 13.)

“Granting that efficient quarantining and “isolation of small-pox cases is our first duty, “and I, personally, am certainly of that opinion, “ought we not to endeavour to make our strong- “hold doubly sure by rendering our susceptible “element—susceptible at least to a severe and “probably fatal attack of small-pox—as small as “possible, by offering vaccination? Our own “cases, lately, certainly seem to prove that vac- “cination has a distinctly modifying effect upon “the virulence of small-pox; and that being so, “it is my duty to lay before you the facts, with “the inference which I, your Medical Officer, “draw therefrom.” (Pages 116 and 117.)

“It is now twenty years ago since Leicester “was visited by a severe epidemic of small-pox, “and since that time odd cases have occurred “here and there in the town, but the Sanitary “Department has succeeded, as yet, in preventing “such odd centres from breaking out into a “general epidemic. The peculiar method adopted “in Leicester—a method which has lately been “designated the ‘Leicester Method’—consists in “at once isolating by removal to hospital the “cases of small-pox as they occur, and in quar- “antining all those who have come into contact “with the cases. The quarantine people are kept “under observation for fourteen days—i.e., during “the recognised incubation period of small-pox. “If at the end of the fourteen days the people “are still well, their clothes are disinfected by

“stoving and washing, and then they themselves
 “are sent home. Those quarantine people who
 “desire it are vaccinated or revaccinated. In
 “connection with the 1892 outbreak of small-pox,
 “there have been vaccinated or revaccinated in
 “all 27 people—viz., 15 children and 12 adults.”
 (Page 117.)

After speaking of the details of quarantine, and suggesting improvements on it being found easier to quarantine at home, Dr. Priestley, in a foot-note, says:—“As the number of small-pox
 “cases has increased, it has been found necessary
 “to quarantine the suspected people at their
 “homes; and, on account of their being kept
 “from work for the whole or part of the quaran-
 “tine period of fourteen days, certain monetary
 “allowances have been made to them by, and
 “with the approval of, the Sanitary Committee.
 “These are distinct modifications of the system
 “of quarantine as previously carried out in
 “Leicester.” (Page 119.)

1893. In 1893 Dr. Priestley published a long report on the small-pox epidemic, covering 117 pages out of 222 of his annual report for that year. Although doing full justice to the “Leicester Method,” he enters into elaborate details which are intended to vindicate vaccination, especially in the population under ten years of age. The outbreak began in the usual fashion with a vaccinated, and probably revaccinated, tramp, in August, 1892, reached its climax in 1893, and then lingered on with sporadic cases until the end of 1894. Dr. Priestley refers to the part that nomadic tramps and gipsies play in the propaga-

tion of small-pox, and to the number of small-pox deaths in England and Wales. He then gives details of the ages of 347 of the cases in Leicester, and amongst these are 2 vaccinated cases under ten, both of which are marked "?"—which, I suppose, means that their vaccination was doubtful. I have shown, elsewhere, that the very fact of a vaccination being doubtful proves that signs of vaccination do exist, otherwise such cases would at once be classified with the unvaccinated; but, notwithstanding these two cases, later on in his report Dr. Priestley says:—"I am able to make the significant statement that there has not been a single case of a vaccinated child under ten years of age treated for small-pox at the hospital during the whole of our epidemic." (Page 116.)

After speaking of quarantine and other matters, the Doctor observes:—"From these quarantine statistics we find that, out of 1,261 persons who have come into more or less direct contact with small-pox in infected houses, 899 were ten years and over, and of these 69 sickened; whilst of 347 cases of small-pox, 240 were of the same age period. It is clear, therefore, that small-pox has broken out chiefly amongst the vaccinated adult population, and has been prevented from spreading, not only by prompt isolation and other measures taken, but also by the fact that our adult population is vaccinated, and, therefore, semi-protected; while, at the same time, 107 children under ten years have suffered. What would have happened had the small-pox 'caught on' amongst children of that age period,

"it is serious to contemplate. Or, again, if all Leicester comes to be unvaccinated (adults as well as children), I feel satisfied that, despite such efforts as have been put forward by the Sanitary Department, Leicester will suffer severely." (Page 99.)

"Of 343 unprotected quarantines, I only succeeded in persuading 51 (i.e., 15 per cent.) to be vaccinated; and of 804 semi-protected quarantines, 72 (i.e., 8.9 per cent.) to be revaccinated. Of the former, 4 were done in the hospital, and 47 outside; whilst of the latter, 1 was done in the hospital, and 71 outside. I am satisfied that in an epidemic of small-pox, quarantining of persons who have come into contact with the disease can be carried out satisfactorily at their own homes more efficiently, and at a much less cost, than in a special building or buildings built for the purpose." (Page 100.)

After reference to many cases in detail and the malignant character of the attacks, even resembling the "black small-pox" of earlier days, Dr. Priestley makes the following observation:—
 "The above statistics are sufficient, in my mind, to show that vaccination has modified the severity of the small-pox attacks in a great number, if not all, of our vaccinated cases. It has, however, been stated that vaccination in infancy is only fleeting in its modifying and preventative effects, which do not, therefore, extend into adult life; so that I think a careful study of the Leicester epidemic will demonstrate the

“value of primary vaccination in extending its influence even so far.” (Page 107.)

Dealing with the hospital staff, the Doctor makes the curious observation:—“The only one “‘inefficiently’ protected to escape was the “matron, who, of course, was not much exposed “to the contagium, taking no part in the actual “nursing of small-pox cases, and only entering “the wards occasionally.” (Page 109.)

The matron not only lived and slept in the building, which was in direct communication with the small-pox wards, but entered the wards almost daily. It is certain that if she had been revaccinated, her immunity would have been attributed to this, and not to “entering the wards occasionally. I always thought a single visit would suffice to seal the fate of the “inefficiently” protected! Among the conditions which favoured the extension or continuance of the epidemic, Dr. Priestley mentions “antipathy to vaccination and revaccination,” but there is not the slightest ground for such a conclusion, rather the contrary. It is clear that the whole report is strongly biassed in favour of vaccination, and he thus concludes:—“In conclusion, my own faith as to “the efficacy of vaccination and revaccination is “well known now. Suffice it, therefore, to “add that such faith has not been shaken, but, “on the contrary, strengthened, by what I “have seen in dealing with Leicester’s small-pox “epidemic, not only whilst treating the patients “in hospital, but also in dealing with the cases “generally in the town (quarantines and others).

“It will be admitted that I have had exceptional opportunities of judging, having seen every case of small-pox, and having visited every infected house.” (Page 137.)

Although the Doctor wrote this, it is strange that he also said, in his introductory letter to the Sanitary Committee:—“Having succeeded in holding in check two such epidemics, you are entitled to great credit—more especially in the case of small-pox, which, by the methods you have adopted, has been prevented from running riot throughout the town, thereby upsetting all the prophecies which have again and again been made. I need only mention such towns as Birmingham, Warrington, Bradford, Walsall, Oldham, and the way they have suffered during the past year from the ravages of small-pox, to give you an idea of the results you in Leicester have achieved—results of which I, as your Medical Officer of Health, am justly, I think, proud. At the same time, the interest shown in your town (in its relation to small-pox) is so great that I have felt it my duty to treat of the epidemic in detail.”

1894. The epidemic died out this year, and the annual report contains a much shorter account than that of 1893. On page 80, the Medical Officer of Health says:—“At the end of the year 1893, the small-pox epidemic began to decline, and on 1st January, 1894, there were only 9 cases of small-pox under treatment in the wards of the hospital (8 having been admitted during the month of December, 1893). During the year 1894, 8 cases have been admitted. . . . Nine

“certificates were received, but one was cancelled, the patient being found to be suffering from chicken-pox. Of the 8 cases of small-pox, 2 were in connection with the 1892-93 epidemic, 4 were imported from other towns (2 from Birmingham, 1 from Manchester, and 1 from Rotterdam), and in 2 the source of the disease could not be definitely traced. Seven of the patients were vaccinated, and 1 an unvaccinated child. There were no deaths.” (Page 29.)

Leicester has established a record in many things, and it would be difficult to surpass the variety of small-pox which, according to Dr. Priestley, characterised the epidemic of 1892-94. It must have severely taxed the ingenuity of the Medical Officer to conjure up such a mass of distinctive adjectives. Cases of small-pox are described as being:—Mild, very mild, mild aborted, very mild aborted, mild discrete, mild abortive, mild and abortive, modified, discrete, mild aborted doubtful, very mild aborted discrete, severe, very severe, severe discrete, confluent, severe confluent, very severe confluent, discrete coherent, confluent coherent, modified discrete, discrete confluent, coherent confluent, coherent malignant, confluent malignant, malignant, malignant undeveloped, semi-malignant, pseudo variolous, defervesced, malignant hæmorrhagic, severe quasi malignant, very severe quasi malignant, variola nigra, genuine, very severe confluent quasi malignant, and others.

No wonder vaccination failed to protect against such a host of enemies. Some persons escaped attack because they were vaccinated; others did

not escape because, although they were vaccinated, its effect had worn out, or they had omitted revaccination. In one instance a mother suffered from "very severe confluent quasi malignant" small-pox, with hæmorrhages and severe tremors, because she was unvaccinated, but, singular to relate, her unvaccinated children escaped!!!

CHAPTER LXXVIII.

LESSONS OF THE SMALL-POX EPIDEMIC AT LEICESTER—1892-94.

AT the conclusion of the above small-pox epidemic, I published an article in the "Leicester Daily Post," 19th June, 1894. This has been revised and considerably abridged:—

THE Medical Officer's annual report upon the Health of Leicester for 1893 has been looked for with more than usual interest and expectancy on account of the small-pox epidemic which existed with greater or less severity throughout the year. Now the report is issued, we are able to gauge, compare, and analyse the effects of the outbreak which has attracted so much attention. Throughout the report Dr. Priestley, oblivious of logic and sequence, loses no opportunity of exalting Jenner's prescription to the skies, and gratuitously affirms at page 137 that his "own faith as to the efficacy of vaccination and re-vaccination is well known now. Suffice it, therefore, to add that such faith has not been shaken, but, on the contrary, strengthened, by what I have seen in dealing with Leicester's small-pox epidemic, not only whilst treating the patients in hospital, but also in dealing with the cases generally in the town (quarantines and others)." One might almost doubt whether a faith, regarded by its devotees as so impregnable, required so many affirmations of belief as the report contains, but certainly the Medical Officer of Health ought to be gratified by the reception his report has received from the medical world. After the many rude shocks to which the theory of vaccination has been subjected of late, this report is regarded as a veritable ark of salvation. Wherever convenient, the Medical Officer has

throughout his report followed what is becoming more and more the formula of the medical profession. "Vaccinated" and "unvaccinated" have now been superseded by the terms "protected" and "unprotected"; therefore, I shall be held blameless for following professional leading on this point. I fully agree with the advocacy of sanitary measures contained in the report, but, having been a careful eye-witness of the outbreak, my figures and conclusions will be utterly opposed to those of Dr. Priestley.

The Medical Officer assumes that there have been a greater number of vaccinations performed in the last few years than are shown in the official returns. He bases this upon the percentage of vaccinated children found at the Board School, Newfoundpool, and upon the supposition that the medical men or the parents do not now trouble to send in the certificates when the operation is performed. In making this assumption he loses sight of

THREE OBJECTIONS.

In the first place, to say the medical men or the parents do not send in their certificates is to affirm that they neglect their duty. Secondly, the vaccination officer's income depends upon his fees, and he would take care no vaccinations were omitted from the registers. And thirdly, the school at Newfoundpool was until recently outside the borough, and in the Blaby Union; therefore the percentage of vaccinations would be much higher than in the town. The signal success which for upwards of twenty years (since the small-pox epidemic of 1871-73) has rewarded the efforts of the Sanitary Committee at Leicester, and enabled them, without recourse to vaccination, to keep the town free from the ravages of small-pox, has naturally provoked the widespread criticism of those who advocate vaccination as the only prophylactic against small-pox. Our escape from "decimation" has hitherto been attributed to our good fortune, coupled with the absence of epidemic conditions. Adverse criticism has focussed itself on the prophecy of approaching doom, when real epidemic conditions pre-

vailed amongst the "combustible" and "unprotected material" which has been for so many years augmenting at Leicester.

MEDICAL OPINIONS ON LEICESTER.

When, therefore, what appeared to be a persistent and continuous outbreak of small-pox occurred in Leicester in 1892, it was universally hailed with grim satisfaction by medical prophets, both at Leicester and elsewhere, as likely to fulfil their prognostications, which have been given forth with a fervency worthy of a nobler cause. . . . Letters appeared in "The Times" and other papers, significantly illustrating the attitude of the medical mind towards the great services Leicester has rendered to mankind by proving on a large scale the superior efficacy of sanitary measures properly applied to the treatment of small-pox, as compared with the alleged "protection" afforded by vaccination. The "Lancet," of 20th January, 1894, also adversely commented on Leicester. . . .

After some reference to the Royal Commission, my article continued :—

In 1871-73 our population of Leicester was what the medical men would call a well-vaccinated and well-protected population. Notwithstanding this, the small-pox epidemic of those years was terribly fatal. There were thousands of small-pox cases and 360 deaths, while the small-pox death-rate for the year of the highest prevalence (1872) was 3,523 per million. The condition of our population is now reversed. If there is any such community in the country, we are pre-eminently an "unprotected" population. Yet during the years 1892-94 we have only had 362 cases and 21 deaths, or a death-rate of only 89 per million in 1893, the year of highest prevalence. If our small-pox death-rate for 1893 had been equal to that of 1872, we should have had 650 deaths, instead of the insignificant 15 which actually occurred in that year. Our small-pox death-rate was only 89 per million in 1893, with little vaccination; while it was 3,523 per million in 1872, with vaccination in full swing. Small-

pox was therefore nearly forty times more fatal in our "protected" population of 1872 than it was in our "unprotected" population in 1892. If our opponents claim that sanitary conditions account for this enormous difference, we reply so much the worse for vaccination, the necessity for which would be entirely destroyed by such an admission.

DEATH-RATES OF THE "PROTECTED" AND "UNPROTECTED."

It is well known that Jenner obtained £30,000 on the promise or guarantee that vaccination would protect from small-pox for life. Very few medical men believe in "life protection" now, and they fix the duration of "protection" according to fancy, from a few weeks to five, ten, or in some instances fifteen years. No tangible proofs are adduced, but the Local Government Board, probably acting upon what it assumes to be the consensus of medical opinion, has issued a memorandum fixing the limit at about ten years.* Let us see how this medically and officially recognised limit applies to Leicester. The population of Leicester is estimated by the Registrar-General to be 184,547 for 1893. The births during the ten years 1884-93 have been 50,370, and the primary vaccinations only 6,289. Whatever the deaths under ten may have been, it will be fair to both sides to allow the influx of population to make up the losses by death of both the vaccinated and unvaccinated. This would leave our "unprotected" child population under ten over 44,000, and the "protected" would be rather more than 6,000, or about one-seventh of the "unprotected." To measure accurately the amount of protection existing in our population it will be necessary to add to the primarily vaccinated or once "protected" the revaccinated, or "doubly protected," during the same period. At the time of the outbreak medical men freely circulated the report

* I do not profess to adopt this method of calculation as my own, but rather to illustrate the dilemma into which an incautious use of figures sometimes lands the medical profession. It has been suggested that the figures representing vaccination should be raised on account of the extension of the Borough. I may point out that this would in no way affect the calculation. It would mean a readjustment, leaving the proportions practically unaltered.

that the inhabitants were flocking by thousands to be vaccinated and revaccinated. An attempt was made on their part to ascertain the exact number, but the inquiry was not sufficiently encouraging, and the figures were not published until the Medical Officer of Health's report appeared. Probably a liberal estimate would be to add one-half the number of the once "protected"—namely, just over 3,000. But to make assurance doubly sure, we will allow nearly another 1,000, making up the total number of "protected" and "doubly protected" to 10,000, out of a population of 184,547. Now, what follows? Taking the Medical Officer of Health's figures, and adding eleven other cases taken note of for the Royal Commission, and four in 1894, we have had from the beginning of the outbreak in 1892 to its close early in 1894, a total of 362 cases, which I distribute as follows:—"Unprotected," 154 (including one doubtful); "protected," 177 (including one doubtful); "doubly protected," 31; many of the two latter classes, as well as the former, being very severe cases. The attack rate in the "unprotected" population was less than 1 per 1,000, while in the "protected" and "doubly protected" classes combined it was nearly 21 per 1,000, being nearly twenty-four times greater than in the "unprotected" class. The deaths all told were 21, of whom one was vaccinated, one revaccinated, and the others are said to have been unvaccinated. Dividing these into three classes—the "unprotected," "protected," and "doubly protected"—we find the respective death-rates to be 109 per million living in the "unprotected," 159 per million in the "protected," and 270 per million in the "doubly protected" class. Whatever comfort the pro-vaccinator may derive from these figures will not be augmented by the knowledge that the outbreak began with vaccinated cases and ended with vaccinated cases, the risks all through being from the vaccinated to the unvaccinated. When we consider the elements which combined for the

DIFFUSION OF SMALL-POX

in Leicester, we may well be amazed at the result. At the beginning of the outbreak came the error in diagnosis by the Medical Officer of Health at the Hospital,

which led to 13 of the scarlet fever cases there becoming infected with small-pox. Of these 13 cases, four died. This disaster led to the distribution of 145 scarlet fever patients to their homes all over the town. All of these had been exposed to the contagion of small-pox. In addition to the fatal possibilities of dissemination of small-pox by this means, the lack of accurate knowledge on the part of many of the medical men accentuated the danger. In one instance a doctor was attending several members of a family (some suffering from confluent small-pox) for nearly three weeks, before he was aware of the nature of the disease. In another instance two doctors were attending two patients for scarlet fever in the same room for nearly a fortnight, both of which cases proved to be small-pox. The Medical Officer of Health himself says that amongst the conditions causing the spread of the epidemic were many errors of diagnosis on the part of medical men. When it is borne in mind that these gentlemen were moving about amongst their patients and the population all the time, there need be no wonder at the continued diffusion of the disease through the town. Then we had no less than twelve importations of the disease by tramps and others from well-vaccinated districts around us, coupled with inadequate resources at the Hospital. Our Sanitary Committee was divided in its counsels, and its policy was dominated by a majority of medical men and their adherents, the former of whom were, to put it mildly, prepared to allow the wreck of the "Leicester method." There had been none too much loyalty in the administration of the Leicester system on the part of those who should have given it hearty support. Our difficulties have been well-nigh insuperable. Notwithstanding this, no fewer than 44,000 of our unvaccinated child-population under 10 have passed through the fiery ordeal unscathed.

After alluding to the "marks" theory, the death-rate of the revaccinated, and the errors of diagnosis, which are referred to elsewhere, I dealt with the

TREATMENT OF THE SMALL-POX PATIENTS.

It has been alleged that our unvaccinated cases suffered terribly, and a lurid picture has been presented of "revolting" cases resembling the "black" small-pox of earlier days. The present outbreak has undoubtedly presented features of great malignity, but to allege that only the unvaccinated suffered from this severe type of the disease is grossly untrue. Very many of the vaccinated and revaccinated cases were fearfully severe, not a vestige of natural features remaining, the "effluvia" being particularly offensive, while if ever a case of "black" small-pox occurred it was the vaccinated (probably revaccinated) laundress of the hospital staff who died. When I saw her a few hours before death, I observed to the nurse that she looked more like a negress than anything else. The severity of other well-vaccinated cases may be gathered from the fact that the Medical Officer, on account of the excessive scabbing and excoriation of the skin, ordered the total destruction of the clothing of the patients rather than incur the risk of infection from disinfected clothing being reworn. I shall be entering upon what is considered as a sacred domain in speaking of the treatment of the patients at the Leicester Fever Hospital. In my opinion it was open to criticism on account of the liberal use of alcohol, and in the omission of other remedies known to be beneficial, but not recognised in the pharmacopœia of the faculty. I believe most of the lives of the children might have been saved by the adoption of these remedies. How long the public will submit to this medical perversity it is not for me to say. The statement of the Medical Officer at page 70, that "The treatment (medical and otherwise) was the same in all," seems to show inadequate adaptation to the circumstances of the cases. Why in such a variety of conditions and physical constitutions was the treatment the "same in all?" Champagne and brandy might be moderately administered to old "topers" like the tramps, or even to strong adults, without much harm, but would it not be calculated to unduly raise the temperature of the children, increase their fever and

delirium, and minimise their chances of recovery? It must not be assumed that I am opposed to the use of alcohol where it is necessary, but the following medical testimony is valuable and significant, showing without its use a saving of nearly 50 per cent. in the mortality. Dr. John Moir, L.R.C.P., Edin., Medical Superintendent of West Ham Infectious Diseases Hospital, writes:—"That in the outbreak of the disease, 1884-85, two thousand odd cases were treated by me in the usual routine method, with the use of alcohol when the heart's action seemed to indicate it, but with no reduction whatever in the ordinary mortality of disease, as I find on consulting my notebook of the cases, the average mortality of the 2,148 attended by me in the West Ham Guardians' Hospital, in addition to that of nearly 700 cases treated by me elsewhere, was 17 per cent. In the hospital ships at Long Reach, Deptford, Dr. Birdwood, the Medical Superintendent in 1886-87, treated the cases under his care there without alcohol, with the surprising result that the mortality was only 6 per cent. The results obtained by Dr. Birdwood determined me to treat my small-pox cases since 1886 without alcohol, with the result that the average mortality in the last 500 cases treated by me has diminished from 17 per cent. to 11 per cent., and in the last 200 cases has been only 8 per cent. So many apparently hopeless cases have I now seen recover without the use of alcohol, which, in my former experience did not recover with its use, that I do not regret the substitution of safer remedies, and I should be afraid again to treat small-pox cases with alcohol, fearing that the mortality would again rise, and that my treatment was responsible for that rise, and consequent loss of life. This record may encourage other observers to adopt the non-alcoholic treatment, and will most assuredly confirm them by their own experience of its trustworthiness and superior efficacy." A result like this would have saved at least seven out of the fourteen children. Here we may have an explanation of the high temperature, delirious fever, and lengthened suffering which the Medical Officer affirms distinguished the unvaccinated children.

The cost of the outbreak and quarantine has been included in another chapter, so is omitted here.

OUR HOSPITAL STAFF.

Much has been written about the "protection" afforded to the hospital staff at Leicester by revaccination, and the dreadful punishment of the six refractory members of the staff who wickedly refused revaccination when generously offered by the Medical Officer. This subject well illustrates the spirit in which the Medical Officer approaches the question. At page 109 of the Health Report for 1893, speaking of the hospital staff, he says:—"The remaining six had only been vaccinated in infancy, and were not, therefore, efficiently protected." This is all very well until we remember that in the self-same report the doctor claims that many cases escaped because they had only been vaccinated in infancy. To consider these six unfortunate individuals seriatim, we find one side holds good until the other is told. At page 109 of his report the doctor says:—"The only one 'inefficiently' protected to escape was the matron, who, of course, was not much exposed to the contagion, taking no part in the actual nursing of small-pox cases, and only entering the wards occasionally." This is entirely opposed to the facts of the case. I have myself walked many times all through the wards with the matron, and she has freely gone in and out, assisting with patients all the time. The next is Nurse W., who, the doctor observes, is "said to have been revaccinated ten years ago." He is "unable to ascertain whether or not her revaccination was efficiently done, the medical man who is stated to have performed it having died." Seeing that the doctor obtained much of his information by hearsay, it is strange that he should seem to cast doubt upon the statement of the nurse herself, as she is one of the most reliable of our hospital staff. Notice also the delightfully vague manner in which the case is described, so as to save revaccination from reproach if it should appear that she was, after all, revaccinated. The doctor says she "suffered from a doubtful attack of modified small-pox,

half a dozen spots in all, and these aborted." I need only ask the question—What is a doubtful, modified, abortive attack? Another case was the poor laundry-woman, who was well-vaccinated, and probably revaccinated. I saw her a few hours before death, and she died a truly terrible example, notwithstanding her "protection." No. 4 is a stoker who was the victim of fear. When supplying the wards with coal, being afraid, he rushed in and out of the wards, but his "well-vaccinated" condition did not save him from a confluent attack of the disease he was supposed to be "protected" from. Of the two remaining members of the staff I need say but little. I saw them along with others, and there is more than one opinion as to their having suffered from small-pox at all. Is not this hospital staff business a little overdone? However, to gratify the doctor, we will assume they suffered from small-pox. It is useless to say they were only semi-protected, because not all revaccinated. The law insists, under penalties upon the unbeliever, that "vaccination is a protection" from small-pox, and such "protection" they had all without exception received. We had at the beginning of the outbreak a total staff of twenty-eight, part well-vaccinated, and the other part revaccinated. Of these twenty-eight "protected" persons, five were attacked with small-pox, one, if not two of them, being revaccinated. One of the latter died, giving an attack rate of about 18 per cent. and a death-rate of the attacked of 20 per cent.

Comparisons with Leicester and other towns are made in another chapter.

OUR "UNPROTECTED" (?) CHILDREN.

I have reserved this most important part of the question until last. Speaking of children, the Medical Officer, at page 67 of the Health Report for 1893, says:—"Under ten years of age, Leicester is practically unvaccinated, and has suffered severely." Yet at page 99 he curiously observes:—"What would have happened had the small-pox 'caught on' amongst children of that

age period it is serious to contemplate." He also predicts that in the future "Leicester will suffer severely." Have we not for many years been medically taught to believe that when infection came these children would "catch on" to decimation? Yet after this outbreak it is still to be in the future. What a commentary on medical prophecy! At page 116 the Medical Officer observes:—"This unvaccinated element under ten years of age is, in my opinion, Leicester's weak point."

At a meeting of the Town Council held in January, 1893, the chairman of the Sanitary Committee read a statement prepared by the Medical Officer, which also appears at page 116 of his report, to the effect that he is "able to make the significant statement that there has not been a single case of a vaccinated child under ten years of age treated for small-pox at the hospital during the whole of our epidemic." This has appeared all over the country, and the "Lancet," of 20th January, 1894, refers to it in the following terms:—"Whereas there was no instance of small-pox occurring in a vaccinated child under ten years of age," yet, on looking at the list, I find no fewer than five small-pox cases under ten years. Why was this misleading and untruthful statement made? If this is a measure of the general veracity of the report, it does not say much for its accuracy. As a sample of the alleged protection afforded until puberty by primary vaccination, I find there are sixty-three small-pox cases ranging from a few months old to twenty-one years, all of which were vaccinated.

STATEMENTS DAMAGING TO LEICESTER

have appeared all over the country to the effect that our child population has suffered terribly from the recent small-pox epidemic. But the very worst thing that can be said against us is, that fourteen children under ten years of age have died of small-pox during an epidemic spreading over nearly two years, and that all these children were unvaccinated. We do not shrink from the issue which this statement involves. On the contrary, we heartily welcome the opportunity of meeting it. Of itself, the bare statement that fourteen unvaccinated

children have died of small-pox proves nothing for or against vaccination, and such a statement only becomes of value as a test when fair comparison is made with other epidemics at other times and places, otherwise it is valueless. In one respect it would have been singular, where nearly all the children are unvaccinated, for any others to die. It is also well known that in

THE BEST-VACCINATED COMMUNITIES

there is always a residue of children, amounting to at least 2 per cent. of the whole population, physically and medically unfit for the ordeal of vaccination. The high death-rate of this residue is always unfairly included in the death-rate of the unvaccinated, and raises the percentage of the unvaccinated death-rate out of equitable proportion. This residue furnished a large proportion of cases and deaths in the Sheffield epidemic of 1887-88. Although the population of Leicester would afford us about 4,000 such children, contributing a large quota to the recent outbreak, we do not wish to shield ourselves behind this zymotically susceptible army. It is obvious, however, that the wider the basis of the unvaccinated population the death-rate is proportionately lowered. This is not only what we should expect to find, but what we do actually find in Leicester.

For the ten years ended 1872, the number of primary vaccinations which were performed in Leicester amounted to an annual average of 84.3 per cent. to the total births. Yet during the epidemic of 1871-73 there died of small-pox in Leicester and its hospital, which was hastily erected on Freake's Ground, no fewer than 193 children under ten, nearly all of whom were vaccinated. This is a small-pox death-rate of 6,699 per million living under ten, and a small-pox death-rate of 1,964 per million on the total population. For the ten years ended 1893, the number of primary vaccinations which were performed in Leicester, including its greatly enlarged area, amounted to an annual average of 12.9 per cent. to the total births. Yet only fourteen children under ten have died during the outbreak of 1892-94, or a small-pox death-rate of only

432 LESSONS OF SMALL-POX EPIDEMIC—1892-94.

301 per million living under ten, and a death-rate of only 76 per million on the total population. The

STAGGERING AND MORTAL BLOW

given to the vaccination delusion by these figures is more graphically depicted in the following table:—

	1871-73.	1892-94.
Estimated total population - - -	98,251	184,547
Percentage of primary vaccinations to births for ten years, ending with the middle of the year of each period - - - - -	84.3	12.9
Number of small-pox deaths under ten years during each period - -	193	14
Small-pox death-rate of children under ten per million living at that age - - - - -	6,699	301
Small-pox death-rate of children under ten per million total population - - - - -	1,964	76

Thus we see that during a comparatively "unprotected" period Leicester's small-pox death-rate amongst children under ten was 6,398 less per million living at that age than it was when we were supposed to be fully "protected"; and it was 1,888 less per million when the deaths under ten are calculated on the total population. In other words, with about seven times more vaccination of children under ten, we had a small-pox death-rate nearly twenty-four times more fatal than in the less "protected" period. Had the same small-pox death-rate prevailed amongst the children under ten in 1892-94 as prevailed in 1871-73, there would have died not the fourteen who actually succumbed, but no fewer than 362. Even with this high number, we should have only been equal, and no worse than in 1871-73, with all our "protection" existing in those years.

ONE MORE COMPARISON.

In 1871-1873, with nearly all our children vaccinated.

the 193 small-pox deaths under ten raised the general death-rate nearly two per 1,000 living, while the fourteen small-pox deaths under ten for 1891-94 make but a trifling fractional difference. In 1872, with full vaccination, Leicester's death-rate was nearly five per 1,000 above that of England and Wales. In 1893, practically without vaccination, Leicester's death-rate was about the same as that of England and Wales, but was also two per 1,000 lower than the average of the thirty-three great towns, equivalent to a saving in favour of Leicester of nearly 400 lives per annum. Again, compare the low fatality of our present unvaccinating period with the high fatality of our highest vaccination period, and we are effecting an annual saving of 1,356 lives, nearly all those of children, which vaccination used to boast it saved. We can well afford to concede all the saving that vaccination claims (even the lives of the fourteen children already referred to), while we show

AN ANNUAL SAVING OF 1,356 LIVES.

In the preface to his annual report for 1893, our Medical Officer of Health says:—"Small-pox, by the methods you have adopted, has been prevented from running riot throughout the town, thereby upsetting all the prophecies which have again and again been made. I need only mention such towns as Birmingham, Warrington, Bradford, Walsall, Oldham, and the way they have suffered during the past year from the ravages of small-pox, to give you an idea of the results you in Leicester have achieved—results of which I, as your Medical Officer of Health, am, justly I think, proud." With this I cordially agree. The "British Medical Journal" is so elated with what it is pleased to regard as the Medical Officer of Health's report in favour of vaccination, that it says, page 1,091, 19th May, 1893:—"We most earnestly hope that the attention of the Royal Commission on Vaccination will be directed to Dr. Priestley's admirable and very important contribution to the literature of the day on these matters." I also agree with this, as an opportunity would then be afforded of presenting the "other side."

Leicester has once more emerged in triumph from the

severest ordeal she has yet been called upon to encounter since the "Leicester system" was adopted, and the "Lancet" and the "British Medical Journal" both know that her victory, and her vindication of the "Leicester system" under almost insuperable difficulties, has sounded the death-knell of the much-vaunted, but now discredited, practice of vaccination.

CHAPTER LXXIX.

LEICESTER SMALL-POX EPIDEMIC—1902-04.

DR. C. K. MILLARD, M.O.H.

IN 1900 and the following years, small-pox became epidemic in London and other parts of the country. The disease was imported into Leicester in 1901, when four cases occurred, but no deaths; and again in 1902, when it assumed epidemic proportions, and continued until 1904.

1902. Dr. Millard has a lengthy article in this year's report, from which these extracts are taken :—

SMALL-POX.—“The epidemic of this disease in London, which began towards the close of 1901, attained serious dimensions during the early months of 1902, and was not finally subdued until about September. As was only to be expected, the presence of the disease in epidemic form in the Metropolis caused it to be widely disseminated. Localised outbreaks of the disease occurred in most large towns, and Leicester was no exception.” (Page 21.)

THE “LEICESTER SYSTEM” OF DEALING WITH SMALL-POX.—“The whole subject of the methods adopted in Leicester for dealing with small-pox will be dealt with in detail in my forthcoming report on small-pox in Leicester in 1903. For

“the present, therefore, I will only emphasise
 “that there is nothing secret or ‘patent’ about the
 “so-called ‘Leicester System.’ Its essential char-
 “acteristic is the absence of compulsory or
 “universal vaccination, which is regarded as all-
 “important in most places. It is just because
 “the ‘Leicester System’ stands for personal
 “freedom in the matter of vaccination—for
 “persuasion in place of compulsion—and because
 “it has undoubtedly (contrary to expectation)
 “been so successful, that the ‘system’ has
 “attracted so much interest, and has acquired a
 “distinctive title. At the same time, it should
 “be clearly recognised that all those Medical
 “Officers of Health who have carried out the
 “‘system’ have been firm believers in vaccina-
 “tion, and have not hesitated to make as full
 “use of it as possible, short of compulsion, when
 “the occasion for it has occurred.” (Page 29.)

VACCINATION.—“The figures show that a very
 “remarkable increase in the number of primary
 “vaccinations occurred last year, the numbers
 “leaping up from 343 in 1900, and 357 in 1901,
 “to no less than 1,237 in 1902! It is sixteen
 “years since anything approaching this last figure
 “was recorded in Leicester, and it will be inter-
 “esting to consider to what cause or causes so
 “striking an increase is due.” (Page 29.) “I
 “think we may conclude that the real explanation
 “(though, no doubt, aided by the prevalence of
 “small-pox in the country) lies in the operation
 “of the 1898 Vaccination Act, the appointment
 “of an active and efficient Vaccination Officer,
 “and the more thorough and systematic adminis-

“tration of the law relating to vaccination.”
(Page 30.)

“In this connection, some reference should be
“made to a noteworthy prosecution—Keyte v.
“Moore—which was instituted by Mr. H. E.
“Keyte, the Vaccination Officer for Leicester,
“towards the end of 1901. The decision of the
“Magistrates, which was against the defendant,
“was appealed against. The appeal was heard
“in the High Court of Justice on 5th March,
“1902, and the conviction was upheld. The case
“was one of great importance, because it estab-
“lished the right of the Vaccination Officer to
“institute proceedings independently of instruc-
“tions from the Board of Guardians. The
“consequence has been that during the remain-
“ing nine months of 1902 no less than 91
“prosecutions were instituted, with 86 convic-
“tions, for failing to comply with the provisions
“of the Vaccination Acts. Mr. Keyte assures
“me that he has no doubt that the increase in
“the number of vaccinations, and also, of course,
“of the exemption certificates, has been largely
“the result of these prosecutions. But he is also
“satisfied that the existence of the 1898 Act,
“with the loophole it provides for those who are
“irreconcilably opposed to vaccination, has facili-
“tated the work, and he believes that in course
“of time the proportion of exemption certificates
“to vaccinations will decrease ; indeed, he informs
“me that there are already indications that this
“is taking place. As regards the question of the
“influence of vaccination upon small-pox, I
“purpose entering upon this subject fully in the

“report I shall shortly be writing on the prevalence of small-pox in Leicester in 1903. For the present, therefore, it is only necessary for me to repeat the conviction I expressed in my last annual report, and which further experience has only strengthened—viz., that recent successful vaccination confers complete protection against small-pox.” (Pages 30 and 31.)

Neither Dr. Millard nor Mr. Keyte proved to be true prophets respecting exemptions. This is how their wonderful prophecy worked out. In 1899 there were only 167 exemptions, but in 1911 they had increased to 2,964!

1903. Although the small-pox epidemic was in full swing, Dr. Millard only makes brief reference to small-pox and vaccination in the ordinary report, because he deals with both in a special report.

SMALL-POX.—“During the twelve months ending 31st December, 1903, there were 406 cases of this disease, 388 of which were removed to hospital. The remaining 18 were only discovered after they had recovered, and too late for removal to hospital to be of service. There were 21 deaths, giving a fatality of 5.17. As the disease is the subject of a special report, it is unnecessary to refer to it further.” (Page 19.)

VACCINATION.—“Table 3 shows the number of primary vaccinations performed and registered in Leicester in 1903 and previous years. The increase in 1902 and 1903 is to be explained partly by the occurrence of the epidemic of small-pox, and partly as the result of the work-

“ing of the 1898 Vaccination Act. The subject
 “of vaccination is dealt with at some length in
 “my report on small-pox.” (Page 19.)

SPECIAL REPORT.—“An epidemic of small-pox
 “in Leicester, owing to its bearing on the vexed
 “question of vaccination, has more than a merely
 “local interest. I have endeavoured, therefore,
 “to make the report a complete one, and have
 “devoted some time to its preparation. So
 “inseparably is the subject of small-pox con-
 “nected with that of vaccination that I have
 “found it impossible to avoid the introduc-
 “tion of some controversial matter. I have
 “endeavoured, however, to approach all dis-
 “puted points in an impartial and unbiassed
 “spirit. It has not been my object either to
 “justify or to condemn vaccination, but rather
 “to obtain fresh light on a highly complex sub-
 “ject. I have, therefore, omitted no material
 “facts whether they tell in favour of, or against,
 “vaccination, and I have tried to give to each its
 “due share of prominence. Where it has seemed
 “to me, after careful consideration, that deduc-
 “tions could fairly be drawn, I have not hesitated
 “to draw them, even though, in some instances,
 “they were not perhaps quite in accordance with
 “orthodox views. At the same time, it is well
 “to point out that the experience of a single
 “epidemic can scarcely be regarded as conclusive.

“I think it must be admitted, after perusing
 “this report, that the measures adopted for con-
 “trolling the epidemic were eminently successful,
 “especially in view of the strong foothold in the
 “town which the disease at one time obtained.

“The total loss of life (21) was far less than
 “might have been expected, and amounts to a
 “mortality rate of less than 0.1 per 1,000 popula-
 “tion. Although the outlook at one time was
 “certainly threatening, there was never anything
 “approaching a panic in the town, and trade was
 “unaffected. Moreover, the total cost to the rates
 “entailed by the outbreak was comparatively
 “small. I gladly acknowledge here the loyal co-
 “operation and assistance which I received from
 “all the members of the Sanitary and Hospital
 “staffs, and more especially from Chief-Inspector
 “Braley. His thoroughness, tact, and special
 “knowledge of small-pox contributed, I believe,
 “in no small measure to the successful suppres-
 “sion of the epidemic.” (Pages 5 and 6, Special
 Report.)

1904. Dr. Millard published a special report on the small-pox epidemic of 1904. It is again a laboured effort in favour of “recent” vaccination. Amongst other statements in his introduction, the following appear :—

“I beg to report to you on the epidemic of
 “small-pox in Leicester in 1904. My previous
 “report to you on the subject of small-pox dealt
 “with the epidemic of 1903, which comprised 394
 “cases, with 21 deaths. The epidemic now under
 “consideration comprises 321 cases, with 4 deaths.
 “The fatality of both epidemics was low, and
 “especially that of the last, which, I believe, is
 “almost unique, being only 1.2 per cent.

“Throughout the whole course of both epi-
 “demics, during which the total number of cases

“occurring was 715, there was NOT ONE SINGLE
 “INSTANCE OF THE DISEASE ATTACKING A PERSON
 “WHO HAD BEEN RECENTLY VACCINATED BEFORE
 “EXPOSURE TO INFECTION. . . . The loss of
 “life caused by the two epidemics was sur-
 “prisingly small. The unvaccinated section of
 “the community again escaped much more lightly
 “than it was feared would be the case. Com-
 “paratively little spread of infection took place
 “through the medium of schools.” (Page 5.)

“On the other hand, great spread took place
 “THROUGH THE MEDIUM OF VERY SLIGHT CASES
 “WHICH HAD ESCAPED DETECTION, and such cases
 “usually occurred in vaccinated subjects. . . .
 “It is a curious coincidence that in the two years
 “(1903 and 1904) in which the epidemic occurred,
 “the general death-rate of Leicester was the
 “lowest on record.” (Page 6.)

Dr. Millard justifies himself in regarding the epidemics of 1903 and 1904 as distinct, as the Small-Pox Hospital was closed on 5th December, 1903, and the town was believed to be free from the disease, but it appeared again on 9th December, and several importations followed. He estimated the total cost of the epidemic at £1,761, but this is far too high, as I show elsewhere. Also, in what way were the few isolated persons recently vaccinated better off than the 215,000 or more who remained without the operation?

Dr. Millard observes :—“The loss of life caused
 “by the epidemic was astonishingly small. There
 “were only four deaths—one a man of broken-

“down constitution and drunken habits, and
 “three children. One of the latter was a baby
 “five weeks old, and one was the child of a
 “tramp. The last case, as stated above, did not
 “belong to Leicester, and was not infected in
 “Leicester so that this death might fairly be
 “deducted. There was also, I am pleased to say,
 “very little permanent disfigurement or injury
 “produced by the disease in those who recovered,
 “the great majority showing no scarring what-
 “ever. On the whole, therefore, Leicester is
 “certainly to be congratulated on having once
 “again escaped so lightly. Whether she will
 “always be so fortunate, time alone will reveal.
 “To prophesy good is as great a mistake as to
 “prophesy evil!”

Classifying the cases, Dr. Millard gives for
 the 1903 epidemic (Dec., 1902—Oct., 1903) :—

		Cases.	Deaths.	Fatality per cent.
Vaccinated	- -	194	4	2·06
Unvaccinated	- -	198	16	8·08
Uncertain	- -	2	1	50·00
Total	- -	394	21	5·38

For the 1904 epidemic (Dec., 1903—Aug., 1904) :—

		Cases.	Deaths.	Fatality per cent.
Vaccinated	- -	127	1	0·79
Unvaccinated	- -	192	3	1·56
Uncertain	- -	2	0	0·00
Total	- -	321	4	1·24

And for the whole epidemic, 1902-04 :—

		Cases.	Deaths.	Fatality per cent.
Vaccinated	- -	321	5	1·55
Unvaccinated	- -	390	19	4·87
Uncertain	- -	4	1	25·00
Total	- -	715	25	3·49

These figures are from pages 20 and 21 of Dr. Millard's report for 1904, and, accepting them as accurate, the very low unvaccinated death-rates of 8.08, 1.56, and 4.87 are worthy of special note. If these figures had been calculated on the "protected" and "unprotected" basis of population, the "unprotected" would have shown a yet lower fatality percentage. Even as they are, they speak volumes as to the unfair manner in which high fatality death-rates are "manufactured" against the unvaccinated. In Leicester the latter have more equitable groundwork for comparison. It is very singular that those whose vaccination is uncertain suffer most.

Dr. Millard then plunges into the vaccination controversy, which he claims to be entitled to do both as a Medical Officer of Health and as having experience of over 700 cases of small-pox. Amongst other observations, he says:—"I wish to say frankly that my whole experience (and I suppose experience counts for something) convinces me that the anti-vaccinists, in trying to disprove that vaccination confers specific protection against small-pox, are leading an utterly forlorn hope. This particular position of the vaccinists is, I am certain, quite impregnable." (Page 28.)

"The cause of anti-vaccination will never make any real progress until the untenable position of denying the protective power of vaccination is finally abandoned. I do not say that it will make very much progress even then, but any progress it may appear to make at present cannot be true progress, for it is

“based upon a fundamental error. Few will
 “deny that exaggerated claims on behalf of vac-
 “cination were made in the past. Perhaps not
 “all of these have even yet been abandoned.
 “Such exaggerated claims have undoubtedly
 “been largely responsible for calling the anti-
 “vaccination movement into existence, and this
 “movement has certainly helped to lead to their
 “exposure. It does not follow, however, that
 “vaccination is therefore a ‘myth,’ or a ‘monstrous
 “delusion.’ or an ‘obsolete fad,’ as many anti-
 “vaccinists appear to believe.

“It has often happened that in controversial
 “questions the truth has ultimately been found
 “to lie between the two extremes.” (Page 29.)
 “If I were called upon to express my own views
 “on the question in a brief sentence, I would say
 “that, whilst I am quite satisfied that a *complete*
 “system of repeated vaccination and revaccination
 “strictly enforced would certainly eradicate small-
 “pox, I am not at all satisfied that such a
 “system is really necessary or even practicable.
 “As for the present incomplete system of single
 “vaccination, its total effect is so uncertain that
 “to attempt to enforce it strictly is both unneces-
 “sary and unwise.” (Page 30.)

Dr. Millard does not tell us what he regards
 as the “complete system of vaccination and
 revaccination” which would eradicate small-pox.
 What he must know full well is that any system
 that either he or anyone else could suggest would
 be impracticable. Why, therefore, does he not
 give up the impracticable, and throw all his
 energies into still further perfecting the “Leicester

Method," if possible—a "method" which has now (1912) successfully stood the test for nearly thirty years?

As for his strong and repeated advocacy of "*recent*" vaccination, many thousands in Leicester who came in contact with small-pox, and had not been "*recently*" vaccinated, escaped the infection quite as well as those who had.

Having dealt with small-pox and scarlet fever, unrecognised cases, vagrancy, and the fatality of small-pox in pre-vaccination times, he speaks of the "Leicester Method," and, strangely enough, after thirty years continuous experience—and two epidemics with low fatalities, such as 1892-94 and 1902-04 give—coupled with his own experience, Dr. Millard gives utterance to a most contradictory statement when he says:—"As regards the 'Leicester Method,' I will say at once that I consider it is too soon yet to arrive at a final conclusion as to its value. Hitherto it has undoubtedly been successful beyond expectation, but it may yet break down and reverse earlier experiences. . . . Leicester's danger, as it seems to me, lies in the fact that the popular feeling against vaccination is so strong that if a breakdown of the present system did occur, it is unlikely that the people would submit to universal vaccination until a very serious catastrophe had occurred." (Page 37.)

He then refers to compensation to contacts as being "money well spent," and with respect to the Royal Commission says:—"It does not appear to be generally recognised that the finding of

“the Royal Commission was distinctly favourable to the ‘Leicester Method.’ With the twelve years further experience which has since been obtained, it is probable that their report would have been even more favourable.” (Page 39.)

“The experience of Leicester certainly confirms this view. Leicester, judging from its low general death-rate, may fairly claim to be a sanitary town, and the fatality of each of the three epidemics which have occurred in the last thirty years has been remarkably low. Curiously enough, the general death-rates for Leicester in the last two years, 1903 and 1904, during which small-pox has been epidemic, have been the lowest on record—viz., 13.9 and 14.5 per 1,000.” (Page 41.)

Dr. Millard utters a further note of warning, asserting that:—“Leicester has succeeded in the past, not *because* she has abandoned infantile vaccination, but *in spite* of having done so, and owing, as I believe, to the vigorous manner in which she has grappled with small-pox in other ways.” (Page 42.) Quite so, it is these “other ways” which have accomplished the work. How long does Dr. Millard think we ought to wait to demonstrate the efficacy of the “Leicester Method”? Is not nearly forty years a sufficient length of time? Will Dr. Millard and his professional friends wait that time before accepting any of the new serums so frequently offered? Jenner and his Parliamentary backers did not wait long before claiming £30,000 for the vaunted triumphs of “one mark” vaccination!

In conclusion, the Doctor once again makes his annual confession of faith, without which he appears to fear he might go astray. He says:—
“I believe absolutely in the protective power of
“vaccination, but I think it possible—

“(a) That the importance of universal vaccination has been over-estimated ;

“(b) That the drawbacks and objections to vaccination have been under-estimated ;

“(c) That the terrors of small-pox (by some and in some ways) have been over-estimated ;

“(d) That the efficacy of modern preventive measures has been under-estimated ; and

“(e) That to attempt to force vaccination upon people against their convictions is unnecessary and unwise.” (Page 43.)

CHAPTER LXXX.

LEICESTER AND SMALL-POX—1902-04.

ON the issue of this report, I published an article, a revised and abridged copy of which follows :—

THE long drawn-out visitation of small-pox at Leicester has now ended. Commencing with some vaccinated cases at the close of 1902, what may be called the first outbreak continued until the end of 1903, during which period there were 394 cases and 21 deaths, being a fatality percentage of slightly over 5.3. After a short interregnum, the hospital being empty for a few days, the second outbreak started, continuing until August, 1904. During the second outbreak, 321 cases occurred, with only four deaths, giving the probably unequalled low fatality-rate of only just over 1.2 per cent. Taking the two outbreaks together, there were in all 715 cases, with 25 deaths, giving a fatality percentage of only 3.5. It is doubtful whether any authentic records of small-pox supply such extremely low death-rates, or indeed any comparable with these.

WHY THE EPIDEMIC LASTED SO LONG.

The outburst might have been limited to the first few cases, and I attribute the prolonged continuance of the epidemic—the longest in duration for nearly forty years—to several main causes. These are (1) errors of diagnosis, (2) delays in notification, and (3) failure to recognise cases on the part of medical men. The existence of a number of mild, unsuspected cases, coupled with some degree of carelessness displayed by many of the inhabitants, have also been contributing factors, and lastly, but by no means least, the undue—in some cases

almost illegal—pressure, direct and indirect, amounting to disregard of personal liberty, by which vaccination and revaccination were forced upon many of the unfortunate contacts. To this I refer hereafter.

DR. MILLARD'S OPINIONS.

Dr. Millard, in his valuable, instructive, and exhaustive treatise, exhibits characteristic courage and originality. His medical friends are at once puzzled and nonplussed by his outspoken convictions as the result of his experience—an experience which runs counter to so many long-cherished beliefs. While disagreeing with some of his conclusions, I have the greatest admiration for the painstaking candour and transparent honesty manifested in the expression of his opinions, which have brought down so many medical fulminations upon his devoted head.

LAW AND AUTHORITY.

The Doctor's history of vaccination law is lamentably incomplete. Only three out of six Acts of Parliament are quoted, and, strange to say, one of those omitted is the principal Act of 1867, which is practically the basis of our vaccination laws. Then Dr. J. C. McVail is actually cited as "one of the highest authorities on small-pox." If Dr. Millard will read Dr. McVail's misleading, unfair, one-sided, and prejudiced references to Leicester in his "Vaccination Vindicated," he will hesitate to accept him as a reliable authority. Mr. Alfred Milnes's able papers, "McVail Unveiled"—in earlier volumes of the "Vaccination Inquirer"—have irretrievably shattered Dr. McVail's claim to be regarded on this question as one's "guide, philosopher, and friend."

ERRORS OF DIAGNOSIS.

The outbreak of 1902-03 started with the disease being imported by a tramp in the workhouse, and it appeared almost concurrently in the town. Early in the outbreak a medical attendant erroneously diagnosed a case of small-pox as chicken-pox. How fatally these errors operate may be gathered from the fact that between 40

and 50 cases, and some deaths, are known to have occurred from this case. Three other errors led to nearly 70 cases. One of the vital omissions from the Medical Officer of Health's report is the absence of a tabulated list of these errors of diagnosis, with their mortiferous consequences. Very many were reported to the Sanitary Committee, and if all had been recorded, they would account for a large proportion of the total number of cases. Considering the enormous number of contacts, it is marvellously surprising that the epidemic did not swell to undue proportions. Once more, there has been none of the predicted decimation of Leicester's population, and, as the Medical Officer of Health himself says of Dr. McVail and other medical prophets of evil to unvaccinated Leicester, "the prophecies remain unfulfilled." Although he unhesitatingly affirms that the "gigantic experiment . . . is not yet completed, and therefore is not yet conclusive," he is compelled to admit "that it has been successful beyond all expectation." Seeing that the "Leicester Method" has stood the test of about thirty years (1904), and Jenner's "method" was rewarded by Parliament after doubtful and disputed experiments of a few years only, one would like to know when the "conclusive" period is likely to arrive. An impartial judge could readily furnish an answer.

THE WORKHOUSE OUTBREAK.

This is one of the most astounding and serious features of the epidemic. We are informed the "tramp sickened" on 16th December, but unfortunately was not removed to hospital till 22nd December. Meanwhile, the disease not being recognised as small-pox, "no precautions were taken." The patient was in close contact with sixty other inmates, six of whom contracted the disease. In all, twenty-two of the inmates were attacked—fifteen adults and seven children. As there were about 1,100 persons in the institution, it is a mercy it spread no farther. But what were the medical authorities about to allow a case of small-pox to exist for a week without discovery, notwithstanding the fact that there is, or should be, a daily inspection of these people? Where was

the astute, capable, experienced, and energetic Medical Officer of the institution? Our Medical Officer of Health considers that "the fact that the outbreak was cut short and prevented from spreading farther . . . certainly reflects credit on the authorities for the energetic steps they took to stamp it out." Opinions differ on this point. Had a poor layman been in fault, no doubt he would duly have appeared before the Magistrates to answer for his shortcomings.

VACCINATION AND REVACCINATION OF CONTACTS.

The measures adopted for controlling the disease are tabulated thus:—(1) compulsory notification, (2) hospital isolation, (3) surveillance of contacts, (4) vaccination of contacts, (5) disinfection, (6) other measures. It is the fashion for those who belittle Leicester to claim that but for vaccination the town would suffer severely from small-pox. This view is effectually dissipated by our Medical Officer of Health. Although vaccination and revaccination were run for all they were worth, and a considerable number, amounting to 73 per cent. of the persons in invaded houses, were vaccinated, the Medical Officer of Health considers the result as a "mere drop in the bucket." He says, "the extent to which it was resorted to . . . was altogether too small to have any appreciable effect upon the course of the outbreak." Nevertheless, by dint of creating terror in the minds of the unfortunate contacts, fear of losing employment, grief-stricken with the calamity which had befallen them, subject to daily persistent attacks on their inbred aversion to the Jennerian rite, many reluctantly yielded against their conviction. To such an extraordinary extent was this pressure exercised that it provoked indignant remonstrance both inside and outside the Sanitary Committee. In one instance a poor widow submitted, and was disabled from work for no less than nine weeks. She lost several pounds in this way, and only received a mere pittance of a few shillings as "contact" pay. In another case a man's wife was taken to hospital, and although he was daily importuned, and had a family of six unvaccinated

children, he refused to allow the operation to be performed, and all escaped. This should appear in the next report, but how many important facts of a like nature are omitted we do not know.

THE UNVACCINATED.

Dr. Millard comes to the conclusion arrived at by Dr. Coupland, who investigated the outbreak of 1892-94 for the Royal Commission, "that the part played by unvaccinated persons in determining small-pox incidence has been over-rated." Certainly when we know that out of about 80,000 unvaccinated persons in Leicester, only 198 out of a total of 394 cases caught the disease, with the thousands of opportunities for contact, the result is surprising to those who are so strongly prejudiced as to believe that small-pox must of necessity "spread like wild-fire amongst the unvaccinated." This untenable theory has been many times exploded by the experience of Leicester, but no doubt, like the fiction of the French and German armies and others of a like kind, it will be resurrected many times yet to come. The low death-rate among the unvaccinated, taking the figures of the report as they stand, and assuming they are correct, is noteworthy. Official records show that in the eighteenth century, before vaccination, and with the prevalence of small-pox increased, and its fatality increased by variolous inoculation, insanitary conditions, lack of hospital accommodation, indifferent medical treatment, and doubtful nursing, the fatality was about 16.5 per cent. In the nineteenth century, with cessation of variolous inoculation, vaccination penally enforced, improved sanitary conditions, palatial hospitals, advanced medical science, rational and educated nursing, this fatality rose to 16.9 per cent.

FATALITY ATTRIBUTED OFFICIALLY TO THE UNVACCINATED.

It is the fashion now to give very high unvaccinated fatality-rates, much above those of the eighteenth century, before vaccination was known. No one can explain how this comes about. The following table is compiled from the official publications in each instance;—

Middlesbrough, 1897-98 (Dr. Dingle) - - -	47.4
London, 1901 (M.A.B. Interim Report) - - -	50.5
Leicester, 1892-94 (Dr. Priestley) - - -	12.4
Leicester, 1903 (Dr. Millard) - - -	8.1
Leicester, 1904 (Dr. Millard) - - -	1.6

The epidemic produced many instances where vaccinated contacts caught the disease and the unvaccinated escaped. All these should have been carefully tabulated in the report. It is also a significant fact that although small-pox has been and is frequently introduced into Leicester by vaccinated persons from well-vaccinated districts, there is no authenticated record, so far as I know, where an unvaccinated Leicester person has conveyed the disease elsewhere. It is manifest from the above table that there is some considerable element of error requiring correction, otherwise, with our better conditions of life, the unvaccinated fatality would not be enormously higher, but less than in the eighteenth century. The low fatality rates of the Leicester figures conclusively prove this.

VACCINATION AND REVACCINATION.

At no period since the great epidemic of 1872 in Leicester have vaccination and revaccination been urged with such unceasing effort upon the population, or enforced by such unvarying persistency upon contacts, as during the recent outbreak, and at no period have we suffered from so prolonged an epidemic. The Medical Officer of Health has adopted a new term in connection with this subject. When before the Royal Commission, I referred to the variety of qualifying terms used in regard to vaccination. Dr. Millard's faith is limited to "recent successful vaccination" as the true and only reliable antidote to small-pox. In the past, before Dr. Millard's time, vaccination alone, of whatever kind, was all-sufficient. Then "good," "proper," "successful," "efficient," and other similar terms were used to designate genuine vaccination of the real stamp. When Dr. Gayton was before the Royal Commission, he declared that his tables proved that this multifarious vaccination did not protect for any given length of time, as infants and children died of small-pox soon after vaccination,

as well as adults, on whom the operation had been performed for a longer period.

THE REVACCINATED.

During the Leicester epidemic, thirty of the cases were vaccinated during the incubation period, and eleven cases occurred, all of whom had been revaccinated. One of these was a medical man, who visited the hospital with many others, at the invitation of the Sanitary Committee and the Medical Officer of Health, for the purpose of acquiring some useful knowledge of small-pox. It is most amusing to read the table of revaccinated. First of all, some doubt is thrown upon the cases, as they are "stated" to have been revaccinated. Then most of them did not "take," or the protection had lapsed through effluxion of time. If they did not "take," the patient must have been immune. But it is certain that if they had all escaped, their escape would have been attributed to revaccination, at whatever date and under whatever circumstances performed. How often have we been assured that protection lasts in some degree through life, and that revaccination makes it doubly secure? There is nothing in the whole realm of history or science that has changed so frequently and illogically as this shibboleth of so-called protection by vaccination and revaccination.

THE FATAL CASES.

Of the twenty-one fatal cases, four were vaccinated in infancy—one having three marks and three having four marks—and three were vaccinated during the incubation period. Two are classed as uncertain, three were infants of three weeks, five months, and thirteen months respectively. Of the remaining ten cases, one was a tramp, and another suffered from other complications. They are thus classified by the Medical Officer of Health:—

	Cases.	Deaths.	Fatality.
Vaccinated - - - -	194	4	2.06
Unvaccinated - - - -	198	16	8.08
Uncertain - - - -	2	1	—
Total - - - -	394	21	5.33

It will be seen that certain deductions must be made before an accurate classification is secured, but taking the figures as they stand, how is it that Leicester yields so low a fatality for both vaccinated and unvaccinated? Is it the improved stamina of the people, due to better sanitation and less vaccination? The following is not a very robust confession of faith by the Medical Officer of Health :—

“Although there is reason to think that the protection conferred by revaccination (performed after a person has grown up) usually lasts somewhat longer than that conferred by infantile vaccination, it is quite certain that the protection is not permanent, and cannot be trusted to last a lifetime.”

TRAMPS.

In this outbreak, as in many others, the poor tramp comes in for his share of blame. While having no special affection for the persons forming this class of the community, I must observe that there is one important fact respecting tramps which has hitherto been lost sight of or ignored. It is that they are the best revaccinated class in the whole population. Were a vaccinal census taken, it would be found that the great majority had not only been vaccinated, but also revaccinated again and again. Whether in vagrant wards or lodging-houses, with or without the bribery of tobacco or the “King’s shilling,” they usually freely submit to the operation, unless, as not infrequently happens, they have suffered ill effects from the operation. When “tramps” are again accused of introducing small-pox, let us remember that in spite of their vaccinal protection, doubled or trebled in many instances, it is their filthy habits which spread disease. Insanitary conditions are the cause.

A “CLOUDBURST SCARE.”

In April occurred what the Medical Officer of Health describes as a “cloudburst.” Out of 65 cases, only one could be traced, and out of 156 cases occurring in four weeks, 412 could not be traced. The sudden and untrace-

able nature of the outburst induced the Medical Officer of Health to say that the infection appeared to have "dropped from the clouds." Whether these 112 cases started "de novo" or through contact remains unascertained. These incidents prove how little is known and how much is conjectured respecting these outbreaks. This outburst was a scare useful to the medical men. It gave a combined fillip to vaccination and fees. On the Sanitary Committee determined efforts were made by medical members to create a "scare," to rush into extraordinary expenditure in the erection of additional buildings, and other panic-stricken measures. Fortunately for the rate-payers, these interesting and interested efforts were successfully resisted, and the town saved from an outlay which would have been trumpeted from "Land's End to John o' Groat's" as indicating a failure of the "Leicester Method." Nevertheless, there is no mistake about the widespread and serious nature of the attack. No fewer than 61 houses were infected at one time in 58 streets, covering an area of no less than two-thirds of the borough. Thirty-seven cases worked at 32 factories and shops, and a "number of unrecognised cases, of a highly infectious type, were going about spreading infection broadcast." Also other unrecognised cases played an important part in the spread of the disease. Such was the nature of the attack which has been successfully resisted, and for which, were it a well-vaccinated town, Leicester would be covered with laudation by all the medical journals in the kingdom.

INJURIOUS EFFECTS OF VACCINATION.

These are too often ignored. Our Medical Officer of Health treats them lightly, although in one case brought before the Sanitary Committee a person was disabled for nine weeks. Could we but follow up the history of all the cases vaccinated during this epidemic, we should hear a sorrowful story. The records of inoculable diseases contain a ghastly series of increased disease and death, while the general death-rate is declining. For a recent proof, we have only to turn to the Gore Farm Lower Hospital extension works. Dr. Stewart had under his

care 587 men, the majority of whom were vaccinated by himself. All the Local Government Board requirements and regulations as to precautions were carried out. Yet, in spite of pure lymph, expert operators, and "every precaution taken," no fewer than 166, or 28 per cent. of these strong, able-bodied navvies, were disabled for periods ranging from $5\frac{1}{2}$ to 35 days, and the whole were on compensatory sick-pay for an average of seven or eight days each. If this is the effect on such a body of workmen, what is it likely to be on our children?

A COMPARISON OF FATALITIES.

A smallpox outbreak occurred in 1892-4, when Dr. Priestley was Medical Officer of Health. There were 362 cases with 21 deaths, or a fatality percentage of 5.8. Very much has been said about the low fatality (5.3) of the epidemic of 1903, but it was not appreciably less than that of 1892-4. I am sure Dr. Millard will not withhold his meed of praise to Dr. Priestley, and without wishing to detract from Dr. Millard's skill in handling the epidemic of 1903, I think, considering all the circumstances, Dr. Priestley's achievement was equal to, if indeed it does not exceed, that of Dr. Millard in obtaining a low fatality. The 1903 outbreak found the town better prepared than that of 1892-94. We had an increased sanitary staff of more experienced officers. Although not yet complete, we possess additional hospital accommodation, with up-to-date appliances, ampler means of isolation, better equipment, and a larger staff of nurses. Besides all this, we have a clever, fully-qualified bacterial expert Medical Officer resident at the hospital. In addition, we called in the aid of another medical man to assist at the hospital. Dr. Priestley coped with it all himself. In April, 1894, the "British Medical Journal" published an article containing a comparative table of small-pox cases and fatalities at various towns. All of these had sedulously obeyed the vaccination laws. On next page I give this table with Leicester (to a later date), and Middlesbrough added.

Town.	Small-Pox.		Fatality per cent. in cases.
	Cases.	Deaths.	
Birmingham	1,203	96	8.0
Leicester	366	21	5.7
Brighouse	134	15	11.2
Manchester	406	27	6.7
Salford	173	22	12.7
Glasgow	279	23	8.2
Liverpool	194	15	7.7
Halifax	513	44	8.5
Warrington	598	60	10.0
Aston Manor	113	6	5.3
St. Albans	58	6	10.4
Middlesbrough	1,411	202	14.3
Totals	5,448	537	Ave. 9.5

All the above are well-vaccinated towns, excepting Leicester, and, perhaps to a much less degree, Halifax, and both these are below the average fatality.

The three epidemics at Leicester give the following results :—

	Cases.	Deaths.	Fatality.
1892-94	366	21	5.7
1902-03	394	21	5.3
1903-04	321	4	1.2

Let any impartial mind examine the above tables, and say whether the protected towns show any advantage. The nearest approach to Leicester is the residential suburb of Birmingham, Aston Manor. But consider the enormous difference in the conditions of Leicester's crowded artisan factory population with that of Aston Manor. Where is the benefit of vaccinal protection? It is perfectly obvious that, whatever the amount of vaccination, no town can afford to ignore the measures implied by the "Leicester Method," introduced by Dr. Johnston in 1877, and now, with improvements, universally adopted. Indeed, more attention is now given to the sanitary precautions of isolation, etc., and no one would now dream of relying solely upon vaccination. Notwithstanding much

that is said to the contrary, this is an absolute proof of belief in the influence of sanitation for controlling small-pox.

COST OF THE EPIDEMIC.

One of the bogies usually marshalled against the "Leicester Method" is that of cost. From past observation I have found that £10 per case is not an excessive expenditure during a small-pox outbreak. It, of course, depends to some extent upon the number of cases, but I have seen statistics where the cost has run up to £20 and £30 per case. Our Medical Officer of Health estimates the cost at £1 per week, and taking $4\frac{1}{2}$ weeks as the average duration, our cases have cost only £4 10s. each. This may or may not be strictly accurate, but what is more to the point is the fact that not a single extra farthing was added to the rates in consequence of the epidemic, and the hospital expenditure was normal. The estimates were prepared without any special provision for small-pox, and the cost of special expenditure such as compensation to contacts for staying away from work, various contingencies, gratuities to the staff for extra work, etc., were covered by our normal hospital expenditure. The "Leicester Method" is not only effective, but inexpensive.

"ADVANCE" LEICESTER!

In summarising the results of the epidemic we may adopt the Australian motto. We are able to take a broader view than the Medical Officer of Health, who, although he has shown a degree of courage and outspoken heterodox conviction, is in a measure bound by tradition. The advance he has made is shown by the limitations of his vaccine creed, now narrowed down to a very meagre base. A little more recognition of the unscientific character of all disease inoculations will remove the last shred of his faith in the "grotesque superstition."

Leicester's small-pox history, and her successful vindication of sanitation as a small-pox prophylactic, will bear the closest scrutiny. Each successive epidemic since vaccination has decreased, with a larger pro-

portion of unvaccinated population, furnishes a still lower death-rate. Leicester's detractors, having failed in repeated attacks upon her ability to deal with small-pox when imported from well-vaccinated communities, have abandoned this cue, and an attempt is now being made to defame her good name by suggesting that syphilis and diarrhoea find their habitat among her population. The infantile syphilitic death-rate is much below that of England and Wales, and the diarrhoea death scourge, which in high vaccination times was the principal cause of over 240 deaths in the first year of life out of every 1,000 births, has now fallen to such an extent that the 240 is reduced to about 160 per 1,000. Let those who decry unvaccinated Leicester bring forward another town of equal size and similar conditions, well-vaccinated, with as little small-pox and zymotic disease, and as clean a bill of health for comparison, if they can! Notwithstanding Leicester's artisan population, its unfavourable geographical position in a water-logged valley, its death-rate, once 27 per 1,000 in vaccination times, is now only 14 per 1,000. This is considerably below that of England and Wales, which includes all the health-giving rural districts and sea-side holiday resorts. With such achievements Leicester may well be proud. When will her detractors have the common honesty to acknowledge her good works. If imitation is the sincerest form of flattery, their words do not accord with their actions, for the "Leicester Method" of dealing with small-pox is now, with a greater or less degree of completeness, practised everywhere.

PART X.

THE "LEICESTER METHOD."

CHAPTER LXXXI.

HOW LEICESTER DEALS WITH SMALL-POX.

IT is often asked—"What is the 'Leicester Method'?" and "In what respect is it better than vaccination?" Let us see! The "Leicester Method" of dealing with small-pox is now known all over the world, and is a considerable amplification of the system of separating the sick from the healthy, or what is known as isolation, which was advocated at the end of the eighteenth century by several writers, including Dr. Mead; Rast, of Lyons; and Faust, of Leipzig. The experiment was actually tried by Haygarth, at Chester, and would, doubtless, have been rapidly established as an important feature in the treatment of all infectious diseases, when the ill-starred advent of vaccination, bolstered up with outlandish assurances, retarded its further development for nearly three-quarters of a century. Just prior to the small-pox pandemic of 1871-73, Sir James Simpson revived the subject in 1868, in

his book on a "Proposal to Stamp Out Small-Pox and Other Contagious Diseases" (published in Edinburgh. Adams & Co., 1871).

1877. Leicester was one of the first places, if not the very first in recent years, to adopt this method. In 1875, on the appearance of small-pox, the initial attempt was made to isolate contacts. In 1877 the disease again appeared, six deaths from it being registered in that year. Dr. Johnston, our Assistant Medical Officer, reported only five, as he said one was wrongly diagnosed as small-pox. That outbreak was particularly notable, and of special importance, from the fact that it not only afforded Dr. Johnston an opportunity to show his faith in vaccination, but also to introduce and establish what has now become known all over the world as the "Leicester Method." I will quote the Doctor's own words, from his annual report for 1877:—

"As the plan which I adopted in the
 "removal of these (small-pox) cases is novel,
 "and may be found useful by Officers of Health
 "in other towns for preventing the spread of the
 "disease, I may be pardoned if I again draw
 "attention to it. In any house where a small-
 "pox case occurred, I endeavoured to impress
 "the inmates with the fact that the removal of
 "all the members of the family to the hospital
 "was the best course to adopt, not only as
 "regarded their own individual welfare, but also
 "that of the town at large. And I am glad to
 "say that all complied with my request, left
 "their infected habitations, and became inmates
 "of the hospital. Altogether, 22 unaffected cases

"were thus admitted into quarantine, and of these 3, after admission, sickened. . . . The epidemic had got firm footing in the town, as it expressed itself in no less than six places. . . .

"The suppression of what might otherwise have proved a widespread epidemic, attended with great fatality, was entirely due to the early information received of the cases affected, and the promptitude observed in their removal.

"As immediate reporting of the cases is of paramount importance in their limitation, it is most desirable that the Corporation of Leicester should endeavour to obtain from Parliament authority to compel the registration of infectious disease within the Borough."

Dr. Johnston, having demonstrated the value of prompt removal and isolation, urged upon the Sanitary Committee the importance of obtaining powers for the compulsory notification of all infectious diseases. The Corporation, at the suggestion of the Sanitary Committee, under the able chairmanship of Councillor (now Alderman) T. Windley, J.P., included the necessary clauses in a Bill then being promoted. Those important clauses were, however, only secured against the strenuous and determined opposition of the local Medical Society, who even carried their hostility to the Committee Room of the House of Commons. Leicester was one of the earliest towns in the country to obtain such powers by a Local Act, which came into operation on 13th September, the same year. The full text of the legal enactment can scarcely fail to provide interesting reading ;—

LEICESTER CORPORATION ACT, 1879.

SECTION 8.

In order to secure that due notice be given to the Corporation of any inmate of any building used for human habitation who is suffering from any one or more of the following diseases—namely, small-pox, infectious cholera, scarlet fever, typhus fever, typhoid fever, erysipelas, puerperal fever, or diphtheria, the following provisions shall have effect (that is to say):—

Sub-sec. 1. If any such inmate be suffering from any such disease as aforesaid, the occupier or person having the management or control of such building, or (if such occupier or person be prevented by reason of such disease) the person in charge of such inmate shall, so soon as he shall become aware of the existence in any such inmate of any such disease, forthwith give notice to the Corporation at the Town Hall of the existence in such inmate of such disease.

Sub-sec. 4. Every medical practitioner attending on or called in to visit such inmate shall, on becoming aware that such inmate is suffering from any such disease as aforesaid, forthwith fill up, sign, and send to the Corporation at the Town Hall, a certificate or declaration, stating, according to the forms prescribed and supplied to him by the Corporation, the name of such inmate, the situation of such building, and the name of such occupier or person, and the nature of the disease from which such inmate is suffering.

And any person who shall wilfully offend against this enactment shall, for every such offence, be liable to a penalty not exceeding ten pounds.

Dr. Johnston succeeded Dr. Crane as Medical Officer, and held the office until 1885, when he resigned the position to devote himself to private practice in the town. Small-pox reappeared in the Borough each year during his tenure, excepting 1879. Isolation and quarantine proved

equally successful and effective on each occasion as when they were introduced by him in 1877. All our Medical Officers, without exception, when appointed, held the current medical belief in vaccination as the only preventive of small-pox, but those who were appointed after Dr. Johnston carried out the "Leicester Method" in a more or less faithful degree.

CHAPTER LXXXII.

DR. JOHNSTON, M.O.H., AND ISOLATION AND QUARANTINE.

1878. Dr. Johnston wrote another "special report" on zymotic diseases in 1878. Referring to small-pox, he says:—"Only one death, I am happy to say, took place from small-pox during the year. The disease was imported by a family of vagrants from London. These people had taken up their residence in a lodging-house in Abbey Street, and two of them were suffering from small-pox. Notice was given to the Sanitary Inspectors of the existence of the disease, and the cases were forthwith removed to the hospital. The following day, after considerable difficulty, I prevailed upon all the other lodgers in the house, nineteen in all, to allow themselves to be placed in quarantine in the hospital. The lodging-house, thus emptied, was thoroughly disinfected, and some of the bedding destroyed. A few days afterwards another case was reported to exist in a yard opposite the house where the others had resided. This case was immediately removed, and the parents were quarantined in the hospital, the house also being disinfected, like the previous one. The Inspectors kept a careful watch over all the houses in the vicinity, but no fresh case appearing, the outbreak was found to

"have been stamped out. But for the facilities
"afforded by the hospital for isolation, there is
"no doubt that the disease would have spread
"rapidly over the town, and given rise to great
"mortality, as it was of a virulent form—the con-
"fluent. Three of the quarantined people sickened
"after admission—one on the second day, one on
"the fourth day, and one on the eleventh day,
"showing that each one had received the infec-
"tion previous to entry into the institution."

After giving a table of small-pox deaths from 1852-78, Dr. Johnston says:—"It would appear
"from the above that the regularity of the
"visitation of the disease was preserved by its
"appearance in the town during 1877 and 1878.
"The mortality, however, which marked its
"previous returns was, in these last instances,
"confined within very narrow limits."

1879. Eight cases of small-pox are briefly recorded, but no death. Although a believer in vaccination, Dr. Johnston had the good sense to leave the vexatious subject severely alone. The word scarcely appears in his reports, and rarely in a controversial sense. His vigour in applying "other means" for dealing with small-pox is worthy of high commendation.

1880. Only a small paragraph on small-pox appears in the report this year. Dr. Johnston says:—"On the 18th of February last year a
"tramp was sent in from the workhouse suffer-
"ing from confluent small-pox. This case,
"though most severe, made a good recovery,
"and no other case of the disease occurred in
"the town." (Page 16.)

1881. In this year's health report, Dr. Johnston, referring to small-pox, says:—"Two deaths resulted from this cause, and both of these occurred in the Fever Hospital. On four distinct occasions this disease appeared in the town, but, owing to immediate removal to the Fever Hospital at Freake's Grounds, together with a thorough disinfection and lime-washing of the houses where the disease had shown itself, the further spread of the malady was arrested. . . . The prevention of the spread of the disease, in all these instances, must be regarded as highly satisfactory, and is a striking proof of the great utility of your hospital when early and complete removal of the sick is secured." (Page 14.)

1882. A number of importations this year tried the new "Method" severely. It is, therefore, sufficiently important to quote the whole of the report on small-pox. Writing in 1883, the Medical Officer says:—"During last year this disease appeared on several occasions in different localities in the town. On the 5th of January, a case was reported in a house in Abbey Street. The patient and the other occupants of the house were removed without delay to the hospital, and the house was forthwith thoroughly disinfected by fumigation and lime-washing. There is no doubt, from inquiries made at the time, that the infection in this case was received from the person of a tramp who had rested for a few hours in the house, and then left the town. On the 7th of January, in another lodging-house in the same street,

“ three fresh cases were reported. These were
“ all removed to hospital, together with the other
“ lodgers, and the same means were employed
“ for disinfecting the house as in the first case.
“ A strict and daily inspection was kept up for
“ some time after among the houses of the
“ neighbouring streets. No fresh cases, however,
“ appeared until the 18th January, when one was
“ reported in Belgrave Gate. After the most
“ careful inquiry, nothing could be elicited to
“ throw light on the source of this case. On the
“ 23rd January two cases were reported in Wood
“ Street, and on the following day three others
“ appeared in different localities of the town
“ (Royal East Street, Green Street, and work-
“ house). Isolation and disinfection were carried
“ out as before. Early in February three cases
“ were reported in the jail, and these were taken
“ to hospital. Eight additional cases occurred
“ before the end of February, in seven different
“ places in the town and neighbourhood. In
“ March, three cases were sent to hospital from
“ New Humberstone and Belgrave; the source of
“ the infection could not be discovered in these
“ cases. In the months of May and June, there
“ was a fresh importation of the disease, when
“ three navvies were reported as suffering from
“ the disease in a house in Hampden Street. On
“ the 15th of August another case came under
“ our notice, and was removed to the hospital
“ from the workhouse, and from that time until
“ the end of the year the disease did not reappear
“ amongst us.

“ Altogether there were 29 cases, and in most

“of these the complaint assumed the confluent
“type. Five out of the total number proved
“fatal. It is now ten years since the subsidence
“of the epidemic of small-pox which prevailed
“in Leicester during the year 1872, when it
“caused no fewer than 346 deaths. This is by
“far the longest period of such exemption from
“small-pox the town has ever experienced, and
“there can be no doubt that but for the prompt
“isolation of the cases as they appeared last year,
“the town would again have been visited by a
“most fatal epidemic of this justly dreaded
“scourge.” (Page 22-23.)

1883. Dr. Johnston has this year a long report on small-pox. So far as it had then developed, the “Leicester Method” proved to be entirely sufficient to cope with the various outbreaks. The report is remarkable for containing two new features. One is the only reference which might be termed controversial that Dr. Johnston ever made in his reports respecting vaccination, and the other gives the particulars of importations of small-pox. The following extracts are taken from pages 29-32 :—

“During the year 1883, 12 cases of this disease
“were received into the Borough Fever Hospital.
“ . . . Of the 12 cases admitted, 3 ended
“fatally, all of whom were unvaccinated. Of the
“9 recoveries, 7 were vaccinated and 2 unvac-
“cinated. In only 1 of the 7 vaccinated cases
“had primary vaccination been performed effi-
“ciently; this patient had three good marks.
“In no instance had revaccination been had
“recourse to. . . . In the last seven years

“there have been no fewer than 17 importations
“of small-pox into the town. . . . Notwith-
“standing this large number of importations, the
“disease has always been stamped out, and the
“town thus saved from the distress and mortality
“which have hitherto accompanied its prevalence.
“The continued exemption from small-pox experi-
“enced in Leicester under so many instances of
“its importation is highly satisfactory, and is
“altogether due to the success which has hitherto
“attended the efforts of the Health Committee in
“securing not only the immediate reporting, but
“also the prompt removal to hospital, of all the
“cases as they came under notice. A review
“of the facts here stated will offer to most
“minds conclusive proof that if Health authorities
“throughout the country could only secure the
“removal and isolation of initial cases of any of
“the essentially infective fevers, the excessive
“mortality now annually arising from them
“would rapidly be reduced to insignificant pro-
“portions, when compared with the fatality
“from other classes of disease.”

1884. Dr. Johnston's last report was for 1884. These paragraphs are culled from the small-pox section (page 37) :—“No fatal case of this disease
“was recorded last year, but three different out-
“breaks were reported in the town and neigh-
“bourhood, and in each instance the infection
“was conveyed from London. Owing to the
“immediate removal of all the inmates of each
“house where the disease appeared to the Fever
“Hospital at Freake's Ground, together with the
“thorough disinfection and lime-washing of the

“infected houses, the further spread of the disease was arrested. . . . During the last eight years there have been no fewer than twenty importations of small-pox into the town and its immediate neighbourhood. The disease has, however, always been stamped out owing to the fact that the Health Committee have always succeeded in promptly removing to hospital, not only those stricken with the malady, but also all the other inmates of each infected house.”

The “Leicester Method” was, therefore, established as a regular system of treating small-pox by the late Dr. William Johnston, when Assistant Medical Officer of Health for the town, in 1877. It started with the segregation of a few small-pox contacts, and, from that humble beginning, has grown to the present uniquely successful, but simple, procedure. It has been a gradual process of evolution, and may be briefly summarised as :—

- (1) Prompt notification ;
- (2) The isolation and segregation of small-pox cases in hospital ;
- (3) Quarantine of all persons found to have been in contact with the patient ;
- (4) The vigilant inspection and supervision of all contacts during the incubation period of fourteen (now extended to sixteen) days ;
- (5) Cleansing, and disinfection of clothes, bedding, and dwellings ; and
- (6) The burning of clothes, bedding, etc., when necessary.

Our chief Sanitary Inspector, Mr. F. Braley, in a letter addressed to me, thus describes his system of setting to work when a case of small-pox is notified to his department:—

“When a case is reported, I at once go to the infected house, and try to ascertain where the disease was contracted, where the patient has been working, where he has been visiting, and his movements generally for the last ten or twelve days. I also make a point of seeing all persons who have visited the infected house during the time stated; in addition, I visit all factories and workshops where other members of the family have been employed; and by this means have been able to get cases removed when the first symptoms of the disease appeared.

“Immediately on the removal of a patient, I superintend the fumigation of the house with sulphur; liquid disinfectants are used freely in the drains and about the yard, and the ashpit is emptied and disinfected; the next day the bedding is taken to the disinfecting chamber, and subjected to the hot-air process.

“Up to the present time I have succeeded in getting almost every person connected with the infected houses into quarantine. In a very few cases I have experienced opposition.”

The isolation of quarantines was made so agreeable that many reluctantly left the hospital when the incubation period had expired, and they could be set free again with safety.

It has been alleged that undue pressure has occasionally been exercised to compel persons to

go into quarantine, and that the Leicester authorities have, in this respect, seriously disregarded personal liberty. That allegation is, even now, sometimes repeated, although it was long since disposed of by a letter from Alderman Windley to the "Times" of 15th October, 1887, as follows:—

"Will you permit me to say—

"(1) That the Sanitary Committee of this Corporation, in their treatment of small-pox cases when they occur, act under the powers of the Public Health Act, 1875, which apply to the country generally.

"(2) That if the sufferer has not 'proper lodging and accommodation' he is removed to the Fever Hospital, and the house in which he was found is disinfected and lime-washed.

"(3) That *whenever we can, we induce* the persons found at the house, who have been in contact with the patient, to go into the quarantine ward at the hospital for a fortnight, making their sojourn there as pleasant as practicable. In one instance we had a refusal, and in that case our Inspector made daily visits to the house in order to ascertain whether any other case had fallen of the disease. WE HAVE NO POWER OF FORCIBLE REMOVAL, AND SHOULD HARDLY APPLY IT IF WE HAD.

"(4) We have never authorised the compulsory vaccination of persons in quarantine; only in a very rare instance was it [vaccination] done with the consent of the individuals, by the ex-Officer of Health, Dr. Johnston, and that is so long since that he does not remember it."

Experience has now taught us that quarantining at the homes of the contacts is safer and better in every respect than their segregation at the hospital. The former practice was adopted in 1892, and is still operative. Indeed, the more fresh air and exercise, the greater freedom and less restriction of the "quarantines," the better the results. At the same time, there is no laxity, but vigilant daily visiting and supervision by the Sanitary Inspectors.

The following is a copy of the procedure, under the "Leicester Method," as matured and put into practice in 1892, which has been maintained up to the present time:—

BOROUGH OF LEICESTER.

SMALL-POX.

At a meeting of the Fever Hospital Sub-Committee, held on 10th May, 1893, the Medical Officer of Health read the following notes:—

The method that is now being carried out in Leicester in connection with the treatment and prevention of small-pox outbreaks is as follows:—

I.—The patient is removed at once to the Borough Fever Hospital, and the house (room or rooms), bedding, etc., disinfected.

II.—The inmates of the infected house and others who may have come into contact with the small-pox case are placed under quarantine observation at their own homes, being visited by the Inspector daily for sixteen days.

III.—Any case of illness amongst these quarantined persons is at once notified to the Medical Officer, who visits the case and removes it to the hospital if necessary.

IV.—The inmates of infected houses and others who may have been in contact with the small-pox case, if thought necessary, are strongly urged not to go to work

for the whole or part of their quarantine period of fourteen to sixteen days, and during that time have been made such allowances as the Sub-Committee have thought fit, the sum advanced in each case being no more than sufficient to cover rent and maintenance. In the event of persons, however, being quarantined at the hospital, as all their food is found for them, only such allowance has been made as would cover the rent; whilst in the event of clothes, bedding, etc., being destroyed, fresh ones have been provided.

V.—Persons whilst under quarantine observation are allowed to go about, and are encouraged to take walks into the country, but are advised not to enter anybody's house, any public institution or meeting under penalty of forfeiting their monetary allowance.

VI.—Quarantine wards within the same curtilage as small-pox wards may, in the opinion of some, be a source of danger to their inmates; this consideration, together with the largeness of the numbers to be dealt with, has led me to watch the suspected people at their own homes.

VII.—Those inmates of infected houses who are willing are sent up to the hospital to have a disinfectant bath and to have their clothes stoved, whilst their houses are fumigated with sulphur meanwhile. Those persons who refuse to go up to the hospital have disinfectants given them, and are asked to have a disinfectant bath at home.

Under conditions satisfactory to the Medical Officer of Health, certain of the people from infected houses are allowed to continue at their work during the whole or part of their period of quarantine. In the case of a small-pox patient being a child recently attending school, the school manager is waited upon, a list obtained of absentees, who are then visited, and the schoolroom if necessary fumigated. So, too, where the patient is at work in a factory or workshop, the names of the absentees from that factory or workshop are obtained, and the absentees visited. The room or rooms in which the patient may have been at work whilst in an infective stage are, if thoroughly necessary, fumigated.

CHAPTER LXXXIII.

COST OF THE "LEICESTER METHOD"— QUARANTINE.

CRITICISMS of Leicester, and of the "Leicester Method" of dealing with variolous outbreaks, have been widespread, but this has been chiefly owing to (1) the strong prepossession of medical opinion in favour of vaccination as the only preventive of small-pox; (2) lack of actual knowledge of the "Leicester Method"; and (3) the natural reluctance of a certain class of people to embrace new ideas.

Another, and perhaps the principal objection, urged both in season and out of season against the "Leicester Method," is that of expense. Usually, this implies that it is far more costly to resort (on emergency) to quarantine and the other *modus operandi* of the "Leicester Method," than to continue the expenditure incurred by a regular system of vaccination.

Happily, I am in a position to completely expose these groundless allegations. Such assumptions are entirely unfounded, and are controverted by the facts. Even if they contained a semblance of truth, there is the cogent and irrefutable answer, that all authorities, whatever the cost, now follow the example of Leicester, by adopting both isolation and quarantine, and never attempt to rely

solely on vaccination. They therefore incur the continuing expense of vaccination, and, at the time of small-pox outbreaks, the superadded cost of isolation and quarantine.

The payments under the "Leicester Method" may be broadly classified under two heads—viz., (1) Quarantine and (2) Hospital Expenditure.

First I will deal with Quarantine, and examine the objection on its merits. We shall find that this indispensable feature, as carried out under the "Leicester Method," is not only thoroughly effectual, but extremely economical, as Table 25 (10 in the Fourth Report of the Royal Commission, which I here reproduce), indisputably proves:—

TABLE 25.

Being Table 10, Royal Commission, Fourth Report.

Table showing, for the BOROUGH OF LEICESTER for each of the years 1874-89, the number of persons who voluntarily entered the quarantine wards at the Fever Hospital after possible exposure to small-pox infection, with the estimated cost of such cases; also the number of small-pox cases for each of the same years.

Year.	Small-Pox Cases.	No. of Persons in Quarantine.	Cost per Person for Fourteen Days Quarantine.	Total Cost.
			£ s. d.	£ s. d.
1874	0	0	—	—
1875	1	0	—	—
1876	9	0	—	—
1877	12	22*	2 11 1	56 3 10
1878	8	21*	2 11 1	53 12 9
1879	0	0	—	—
Carry forward	21	43		£109 16 7

TABLE 25.—Continued.

Year.	Small-Pox Cases.	No. of Persons in Quarantine.	Cost per Person for Fourteen Days Quarantine. £ s. d.	Total Cost. £ s. d.
Brot. forward	21	43		£109 16 7
1880	1	0	—	—
1881	6	3*	2 11 4	7 13 3
1882	29	33*	2 11 1	84 5 9
1883	12	26*	2 11 1	66 8 2
1884	6	13*	2 11 1	33 4 1
1885	8	10	0 19 0	9 10 0
1886	1	2	1 3 0	2 6 0
1887	10	14	2 4 8	31 5 4
1888	22	39	3 3 0	122 17 0
1889	0	0	—	—
Totals	116	183		£467 6 2

* One case of small-pox occurring in 1875 and one in 1888 are omitted from the Medical Officer's reports, but are included in this table, which has, for the most part, been compiled from the reports of the Medical Officer of Health, but the figures marked with an asterisk (*) have been obtained principally from information supplied by the Chief Sanitary Inspector, no exact records having been kept of quarantined persons until 1886. For each of the four years 1885-88 the Medical Officer of Health has published the weekly cost of each hospital patient, including quarantined persons. (See Health Reports for those years.) He thus takes the maintenance of a person in quarantine to be equivalent to the cost of an ordinary patient. On this basis of calculation, the average cost of the sixty-five persons quarantined during 1885-88 was a fraction under £2 11s. 1d. for each person for the usual quarantine period of fourteen days. This rate has, therefore, been taken in the above table as a fair average for the years 1877, 1878, and 1881-84, for which years there is no exact official information.—J. T. B.

This table shows that from 1874 to 1889, a period of sixteen years, we had 33 importations and 116 cases of small-pox. Arising from those cases, 183 persons were placed in quarantine, and the expenditure was only £467 6s. 2d., or, adding £21 5s. for disinfectants, loss of bedding, and other items, a total of £488 11s. 2d. This is an expenditure of just over £30 a year, or £2 13s. 4d. for each person—surely not by any means a serious outlay.

During the same term (1874-89), the cost of public and private vaccination, in Leicester, was £9,818 2s. 11d., or over £600 a year, being twenty times more than the cost of quarantine.

Now, manifestly, this expenditure of nearly £10,000 upon vaccination had not been effectual in either keeping small-pox away from the town, or in coping with the disease when imported. Nor had the authorities implicit faith in the efficacy of the operation to prevent the spread of the disease. Otherwise they would not have spent about £500 on quarantine, etc., which experience proved to be effective, and which would, no doubt, have proved equally, or even still more effective, if the £10,000 outlay on vaccination had never been incurred. Therefore, comparing the two systems, no less a saving than of nearly £10,000 could have been made in these sixteen years by the exclusive adoption of the "Leicester Method." This large amount was wasted, to say nothing of the injuries and deaths which are the usual sequelæ of vaccination, for which this liberal sum was paid.

Dr. Priestley, on pages 135 and 136 of his report

for 1893, calculates the cost of quarantining 1,261 persons at £557 8s. 2d. Adding £109 7s. for structural alterations for the accommodation of the quarantines, he reaches the sum total of £666 15s. 2d., being 12s. 6d. each for those at the hospital, and 2s. 3d. each for those quarantined at home; or an average of about 10s. 7d. for each quarantine.

Dr. Millard, on page 19 of his report for 1904, makes an effort to ascertain the cost of the quarantines and the small-pox epidemic for that year. His estimates are carried out thus:—

Compensation of contacts - - -	£177
Vaccination of contacts (estimated)	130
Gratuities to sanitary staff - -	60
Disinfectants, cab hire, and sundries	100
Total cost of quarantine - ———	£467
Maintenance in hospital, for 306 patients, at £1 per week each - -	1,294
Total cost of quarantines and epidemic - - - -	<u>£1,761</u>

Deducting the hospital expenditure, there remains a sum of £467 to distribute amongst 823 quarantines for 1904, or an average cost of only 11s. 4d. for each person, slightly more than Dr. Priestley estimated.

There are elements of error in both these estimates of the Medical Officers. That of Dr. Priestley is arrived at in a rough-and-ready fashion, which does not make for accuracy, whilst Dr. Millard has not only included con-

siderable items which were properly chargeable to 1903, but he appears to have lost sight of one very important factor. A very large proportion of his £1,761 is ordinary hospital expenditure, which would have been incurred under usual conditions—even if small-pox had been absent.

Under these circumstances, and to prevent any possible dispute after these figures are published, I thought it best to have the actual expenditure direct from Mr. W. Penn-Lewis, who occupies the official position of Treasurer and Accountant under the Leicester Corporation, and whose authority and fame as a public accountant is not only widespread, but whose accuracy in financial matters is unimpeachable. Mr. Penn-Lewis has very kindly supplied me with the hospital disbursements for a long period of years. These reach back to the time of the old hospital on Freake's Ground, which was used for the small-pox epidemics of 1871-73 and 1892-94. The new Isolation Hospital, on Groby Road, was opened in 1900, and the buildings on Freake's Ground, or such of them as were in sufficiently good condition, were removed, and re-erected as a Small-Pox Hospital on a site at an approved distance from the new hospital buildings.

Mr. Penn-Lewis also readily obliged me with the cost of quarantine from 1892 to 1906, and his official statement is here given:—

TABLE 26.

LEICESTER CORPORATION.

Payments for quarantine of persons and other charges consequent on SMALL-POX EPIDEMICS in each of the following years:—

Year	Allowances.	Shorthand. Notes.	Printing, etc.	Petty Cash, etc.	Meat Destroyed.	Gratuities to Sanitary Inspectors, etc.	Yearly. Totals.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1892-93	89 8 6	58 16 0	83 12 0	—	—	—	231 16 6
1893-94	117 0 8	—	—	—	—	20 0 0	137 0 8
1901-02	27 19 0	—	—	—	—	5 0 0	32 19 0
1902-03	80 2 6	—	—	9 18 7	—	—	90 1 1
1903-04	172 7 0	—	0 15 0	1 7 6	4 0 0	80 5 0	258 14 6
1904-05	129 19 6	—	—	2 17 6	—	7 10 0	140 7 0
1905-06	0 12 0	—	—	—	—	—	0 12 0
Totals	£617 9 2	£58 16 0	£84 7 0	£14 3 7	£4 0 0	£112 15 0	£891 10 9

W. PENN-LEWIS,

Leicester, 8th February, 1912.

Borough Treasurer.

The above should completely settle the question as to economy in the cost of quarantine, especially when we supplement Table 10 of the Royal Commission, Fourth Report, with a further detailed table giving the number of quarantines, from 1890 to 1910:—

TABLE 27.

Table showing, for the BOROUGH OF LEICESTER, the number of persons who, having been in contact with small-pox cases, were under surveillance as quarantines, 1890-1910; also the number of cases of small-pox for each of the same years, and the total cost of quarantine.

Year.	Small-Pox Cases.	No. of Quarantines.	Total Cost.
1890	0	0	<div> <div>£ s. d.</div> <div>368 17 2</div> </div>
1891	0	0	
1892	38	283	
1893	320	1,261	
1894	8	53	
1895	4	0	
1896	0	0	
Carry forward	370	1,599	£368 17 2

TABLE 27.—Continued.

Year.	Small-Pox Cases.	No. of Quarantines.	Total Cost.
Brot. forward	370	1,599	£368 17 2
1897	0	0	} = 7 years 381 14 7
1898	0	0	
1899	0	0	
1900	0	0	
1901	4. 4	5	
1902	18	156	} = 7 years 140 19 0
1903	406	1,919	
1904	307	823	
1905	5	62	
1906	1	8	
1907	0	0	} = 7 years 140 19 0
1908	0	0	
1909	0	0	
1910	0	0	
Totals	4,107 1,111.	4,572	£891 10 9

This expenditure of £891 10s. 9d. includes a sum of £142 8s., for 1892-94, for shorthand notes and printing, being the cost of the inquiry into the outbreak of small-pox at the hospital, due to an error of diagnosis by the Medical Officer of Health.

This sum ought, properly, to be deducted, but I am content to take the figures as supplied to me by Mr. Penn-Lewis.

It will be seen from Table 27 that during the twenty-one years from 1890 to 1910, we had 41 importations of small-pox, ~~4,107~~ cases, and not less than 4,572 quarantines. Very few, if any, of the latter large number were quarantined at the hospital, experience having shown it to be quite as effectual, safer, and more agreeable to the people themselves to quarantine them by surveillance at their homes. The cost of quaran-

tinuing these contacts was, therefore, less than 3s. 11d. per person, the total amount expended under this head being only £891 10s. 9d., or less than £43 per annum. During the same period of years, the expenditure on vaccination was £7,424, or over £358 per annum. If Leicester, however, had, during these twenty-one years, relied solely upon vaccination as a safeguard, and disregarded isolation and quarantine, a very different story would have to be written. Either, or both, of the epidemics which occurred would undoubtedly have been of much greater dimensions, and would have meant not only a much larger expenditure, but a sad tale of widespread suffering, sorrow, disaster, and death.

The money spent on vaccination was entirely thrown away! On the other hand, that which was expended on isolation and quarantining did the effectual work in controlling the two small-pox epidemics of 1892-94 and 1902-04.

These facts indisputably dispose of the wild and absurd theories which have been promulgated as to the excessive and extravagant cost of the "Leicester Method" of quarantine.

Before leaving the subject of quarantine, I might refer to the fact that very much has been made of the supposed large number of contacts who have been compulsorily vaccinated during quarantine. That this allegation has no foundation will readily be seen. From 1874 to 1889, only very few were either vaccinated or revaccinated. No register of these was kept either at the hospital or elsewhere, and exact information on this point is not obtainable prior to 1886, in

which year there were two, "some" in 1887, and six in 1888. The number vaccinated in Dr. Priestley's time is recorded as 150, although he, like other Medical Officers, refers to the difficulty he experienced, but no doubt persuaded as many as he could to submit to the operation in 1892-94. Dr. Millard did the same in 1902-04, and claims that he induced several hundreds, but confesses that he found it a "thankless task." No "compulsion" was exercised in any of these instances, so far as the authorities were concerned. Table 28 gives all that was officially known on this subject down to 1889.

TABLE 28.

Being Table 9, Royal Commission, Fourth Report.

Table showing, for the BOROUGH OF LEICESTER for the years 1886, 1887, and 1888, the number of persons vaccinated or revaccinated after voluntarily entering the quarantine wards at the Fever Hospital after possible exposure to small-pox infection.

Year.	No. of Persons in Quarantine.	No. of Persons Vaccinated after entering Quarantine.	No. of Persons Revaccinated after entering Quarantine.	The vaccinal condition of those (43) persons not submitting to the operation whilst in Quarantine.	
				Vaccinated.	Unvaccinated.
1886	2	0	2	0	0
1887	14	4	1	9*	0
1888	39	2	3	30†	4
Totals	55	6	6	39	4

* Two of these were vaccinated only two days before entering the quarantine wards.

† One of these was vaccinated only one day before.—J. T. B.

CHAPTER LXXXIV.

HOSPITAL EXPENDITURE.

WE now come to the expenditure at the hospitals. In estimating the cost of small-pox epidemics, we simply have to compare the ordinary sanitary and hospital expenditure, when small-pox is absent, with the expenditure for the same purposes when the disease is present. The real cost of any outbreak is the actual payment in excess of normal outlay.

The hospital expenditure for 1902-04 includes the payments at both the Infectious Diseases and Small-Pox Hospitals, as well as the payments for isolation and quarantine, which, as has been shown, are an economical but important feature of the "Leicester Method." To make this matter quite clear: I wish to strongly emphasise the fact that, although the cost of quarantine has already been separately computed, it is also included in the payments enumerated in this chapter, which specifically records the complete cost of the two small-pox epidemics of 1892-94 and 1902-04.

The outbreak in 1892 commenced with a vaccinated case, in June, and ended with the last case (also vaccinated), in December, 1894. I, there-

fore, take the payments for the years 1892-93, 1893-94, and 1894-95, each of which years commences on 1st April and ends with 31st March, and exactly corresponds with the financial year of the Imperial Exchequer. The figures have been supplied to me by Mr. Penn-Lewis, the Borough Treasurer.

The estimated and actual administrative expenditures at the hospital, exclusive of loan charges, were :—

Year.	Estimated Expenditure.	Total Payments.
1892-93	£1,710 0 0	£3,871 16 4
1893-94	2,105 0 0	2,859 17 8
1894-95	2,000 0 0	1,972 3 3
	<hr/>	<hr/>
Totals	£5,815 0 0	£8,703 17 3

Of the actual payments, over £867 was spent in additional buildings, and a further sum of about £213 for furnishing and equipment, making about £1,080 in all, which should be deducted from the total of £8,703 17s. 3d. for the three years. This would leave £7,623 17s. 3d., including the cost of quarantine, or an excess of only about £1,808 as the cost of the epidemic for the three years, or practically £600 per annum. This is not a serious amount, especially when we remember the vast expenditure at London, Glasgow, and Sheffield, and that the stated amount also embraces the whole of the cost of quarantine. Moreover, against this we have to set the saving on vaccination, at Leicester, from 1892 to 1895, which would not be less than

£4,000, and this sum far more than extinguishes the extra expenditure, if any, due to the epidemic.

The outbreak in 1902 commenced with a vaccinated case, in February, and ended with a vaccinated case, in August, 1904. The estimates and payments for the hospitals are taken on the same basis as for 1892-94 :—

Year.	Estimated Expenditure.	Actual Payments.
1902-03	£6,000 0 0	£6,563 5 0
1903-04	6,000 0 0	7,102 15 1
1904-05	6,500 0 0	6,436 10 3
Totals	£18,500 0 0	£20,102 10 4

Of the payments, £1,033 2s. 7d. was expended for completion of the buildings, and the furniture and equipment cost another £327, or a total of about £1,360 to be deducted from the actual total payments of £20,102 10s. 4d. This leaves the net administrative expenditure at £18,742 10s. 4d., including cost of quarantine, or an excess of only £242 10s. 4d. on the three years, or merely £80 16s. 9d. per annum—a very trifling sum indeed.

Now, it is not unusual for the estimated expenditure on infectious diseases hospitals to be exceeded, even when there is no small-pox, for the simple reason that it is always a difficult task to accurately forecast the probable number of patients for a whole year in advance. For example, in the three years 1895-98, there was an excess of £1,984, and in the three years 1899-1902, there was an excess of £2,083 at the Leicester hospitals, when there was no small-

pox. We are, moreover, entitled to take credit for the estimated cost of vaccination, which, with the increased fees payable under the Local Government Board's Order of October, 1898, would not have been less than £6,000 for the years 1902-03, 1903-04, and 1904-05.

Taking all this into account, for each of the three-year periods of the two Leicester small-pox epidemics, we arrive at the following result:—

1892-95—Estimated expenditure at				
hospitals - - - -	£5,815	0	0	
Estimated cost of vac-				
cination - - - -	4,000	0	0	
1902-05—Estimated expenditure at				
hospitals - - - -	18,500	0	0	
Estimated cost of vac-				
cination - - - -	6,000	0	0	
				£34,315 0 0
1892-95—Actual net administrative				
expenditure, exclusive				
of structural and fur-				
nishing costs - - -	£7,623	17	3	
1902-05—Actual net administrative				
expenditure, exclusive				
of structural and fur-				
nishing costs - - -	18,742	10	4	
				26,366 7 7
Saving by the "Leicester Method" -	£7,948	12	5	

Not only, therefore, is the "Leicester Method" economical and efficacious, but, in the two small-pox epidemics mentioned, instead of an expenditure of huge sums on new structures, and on vaccination and revaccination, such as is

incurred by towns relying (or professing to rely) solely on vaccination, Leicester actually saved about £8,000, or over £1,300 each year during the continuance of these two small-pox epidemics.

However, there is no need to shield the expenditure on the two Leicester small-pox epidemics of 1892-94 and 1902-04 behind the excess expenditure of other years, or even on the estimated cost of vaccination. Let us take the figures as they stand, and not only include the structural alterations, but entirely exclude the saving on vaccination, and then compare the cost with that of the small-pox epidemics in Sheffield, in 1887-88 ; in Glasgow, in 1901-04 ; and in London, in 1900-02, as near as the expenditure at those places can be ascertained. This always presents a difficulty, for I have never yet seen a thoroughly honest attempt to assess and tabulate the actual cost of any small-pox epidemic.

The expenditure is nearly always complicated with the payments for vaccination, revaccination, and structural outlay. But with respect to the figures given here for Leicester, it is essential to remember that they include all charges incident to every item of expenditure for the "Leicester Method" connected with the two small-pox epidemics of 1892-94 and 1902-04, and that the whole of these disbursements were met without the addition of a single farthing to the rates.

Now, taking the expenditure at London, Glasgow, Sheffield, and Leicester on the same basis, as far as the published official figures are available, we arrive at the following comparison :—

TABLE 29.

SMALL-POX EPIDEMICS, COST, AND FATALITY RATES
COMPARED.

	Vaccinal Condition.	Small-Pox Cases.	Small-Pox Deaths.	Fatality- Rate Per Cent.	Cost of Epidemic.
London, 1900-02	Well Vaccinated	9,659	1,594	16.50	£492,000
Glasgow, 1901-04	Well Vaccinated	3,417	377	11.03	150,000
Sheffield, 1887-88	Well Vaccinated	7,066	688	9.73	32,257
Leicester, 1892-94	Practically Unvaccinated	393	21	5.34	2,888
Leicester, 1902-04	Practically Unvaccinated	731	30	4.10 4.24	1,602

It will be seen that in the three most recent and comparable epidemics, all of which have occurred this century, the cost per case was—London, 1900-02, £50 18s. 9d. ; Glasgow, 1901-04, £43 6s. 3d. ; and Leicester, 1902-04, only £2 5s. 5d.

On the other hand, what is of still more benefit and importance, the "Leicester Method" secures not only a diminished prevalence, but also an almost incredibly small mortality and case-fatality rate from the disease. The case-fatality of Leicester is only about one-third that of Glasgow, less than half that of Sheffield, and about one-fourth that of London.

This is irrefutably and absolutely conclusive, not only as to the Greater Economy, but also the Marked Efficiency, of the "Leicester Method" of treating small-pox.

Even these results, truly and significantly

remarkable as they are, could be improved upon, if, as I have shown elsewhere, the fatal prepossession in favour of vaccination could be eliminated from the minds of our Medical Officers and the staff working under them, and they were one and all inspired by a whole-hearted and thorough determination to get the best results possible out of the "Leicester Method."

In the last paragraph of the preface to Dr. Millard's report on the small-pox epidemic of 1903, he says:—"I gladly acknowledge here the "loyal co-operation and assistance which I "received from all the members of the Sanitary "and Hospital staffs, and more especially from "Chief Inspector Braley. His thoroughness, tact, "and special knowledge of small-pox contributed, "I believe, in no small measure to the successful "suppression of the epidemic."

Again, in the last paragraph of Dr. Millard's preface to the small-pox report for 1904, he says:—"I wish to acknowledge here the great assistance "I have received in dealing with the epidemic "from Chief Inspector Braley (whose work in "connection with small-pox is invaluable), and "the other members of the Sanitary staff; also "from Dr. Allan Warner (Assistant Medical "Officer of Health), and the various members "of the Hospital staff. One and all have worked "loyally and well." Dr. Priestley paid Inspector Braley a similar compliment.

Mr. Francis Braley became Sanitary Inspector just after, or at the close of, the great small-pox epidemic of 1871-73. He was, therefore, an officer

before the "Leicester Method" was introduced, and, as he is still in office, he has had a rare experience of the working of the "Method"—longer, indeed, than any other official. Although a believer in vaccination, he has undoubtedly worked most loyally and devotedly in the application of the "Leicester Method" to the various small-pox outbreaks in the town during the past forty years, and I must cordially endorse all that Dr. Priestley and Dr. Millard say of him. I will go further, and affirm, that if all our Medical Officers of Health had been as devoted to their duty, and left their belief in vaccination as much in abeyance as Mr. Braley has done, the results achieved by the "Leicester Method" would have been considerably amplified and enhanced.

The success of the "Leicester Method" is due to Chief Sanitary Inspector Braley, probably more than to any other man, and I have pleasure in adding my own acknowledgment of his invaluable services.

CHAPTER LXXXV.

THE "LEICESTER METHOD" AT WORK.

EFFECTIVE as the "Leicester Method" has been, and still is, it must not be supposed that it has ever been worked to the best and fullest advantage. Otherwise, much better results could have been obtained. All our Medical Officers of Health have been orthodox pro-vaccinists of the most pronounced type, and such modifications of their views and beliefs on that subject as they may have subsequently entertained have reluctantly resulted from the actual facts which have come under their own personal observation by the various outbreaks of small-pox from time to time in the several epidemics. If we except Dr. Johnston—who started the "Leicester Method" by isolating the contacts—our other Medical Officers have approached the question, believing strongly in vaccination, and looking askance (or, at least, doubtfully) upon any beneficent outcome which might be expected from the "Leicester Method."

In this category I must, for the present, exclude Dr. C. Killick Millard, who has been our Medical Officer since 1901—and still holds that office (1912)—at which time the benefits of the "Leicester Method" were so far established as to command respectful attention from whoever

might then have been selected for the position to which he was appointed. At that time, the exact line adopted by Leicester and its attitude towards vaccination were fully explained to all the applicants for the vacant office who were interviewed by the Sanitary Committee. By the appointment of Dr. Millard, we were fortunate in securing an official at the head of the town's health department whose activity and open-mindedness it would be difficult to surpass. Besides this, he is a statistician—a distinction which, without disrespect, none of his predecessors had, whatever pretensions they might make to such a claim. Dr. Millard has approached the position in Leicester with a fairly open mind. Although he admits, as his writings also prove, that his experience here has considerably modified his opinions, he still remains a firm provaccinist, to the extent of believing in "complete protection" from small-pox by "recent" vaccination. After the overwhelming strength and mass of evidence to the contrary, given by Dr. Gayton, Professor Crookshank, Dr. Creighton, and many others, before the Royal Commission, it is difficult to imagine how Dr. Millard can still cling to this tattered fragment of Jenner's original prophylactic creed.

It will, therefore, be at once apparent that the predominant thought uppermost in the minds of all our Medical Officers, in working the "Leicester Method," has ever been to vindicate vaccination, rather than to carry out the "Method" amply, fully, and completely. In saying this, I do not wish or intend to convey

the slightest reflection upon any one of them. This attitude is the natural outcome of their training, and their regard for the well-known and loyally-recognised "etiquette" of the medical profession. Then, again, it must be remembered that besides the direct influence the Medical Officer of Health exercises as chief, all his subordinate staff have undergone a similar training, in the same illusive environment. Hence every solitary favouring circumstance, however small or remote, logical or illogical, is made to tell in favour of vaccination, even here, in the "Mecca" of the anti-vaccinist. Whilst the law continues to enthrone the medical profession, *ex cathedra*, it must, I fear, inevitably be so.

There are two material features consequential on these conditions, both of which stand forth in strong outline against the horizon.

The first is, that whatever has been achieved in the past under the "Leicester Method" is the minimum of what might be accomplished by a whole-hearted belief, and a thoroughly complete, practical, and unreserved administration of all that it embraces and involves.

The second point is, that so perfect an administration is likely to be delayed, rather than promoted and encouraged, under the present conditions—imposed by the law of the land; and that such an administration can only be realised in its entirety when Medical Officers have relegated vaccination to the moles and the bats, just as they have done cupping, bleeding, leeching, and many other equally unwise, errone-

ous, and abnormal practices of the profession. There is, however, some faint gleam of hope in their constant changes of treatment in the past, and, as has been exemplified quite recently, in the complete transformation of medical opinion as to the proper treatment of consumptive persons.

In this last remark, I refer to the open-air system, and not to the retrograde tuberculin inoculation, on which I shall have a word to say later.

Let me reiterate, as strongly and as emphatically as possible, that the "Leicester Method" has not, even yet, had a fair field and a free, unfettered trial, and that it is capable of accomplishing much more than has so far been reluctantly and begrudgingly credited to its benign and generous influence.

A few of the more striking advantages of the "Leicester Method" which might be cited are :—

- (1) It can be carried out by the ordinary staff.
- (2) It offers no risk of contamination from other diseases, such as is now acknowledged to be incurred by vaccination.
- (3) It causes the minimum of inconvenience and friction.
- (4) It secures the maximum of benefit and safety.
- (5) It is strictly economical.
- (6) The experience of nearly forty years has incontrovertibly proved it to be completely effective.

CHAPTER LXXXVI.

THE CHAIRMAN OF THE SANITARY COMMITTEE ON THE "LEICESTER METHOD."

IN 1902, Alderman Windley and the author were appointed delegates to the annual meeting of the Royal Institute of Public Health, held in August, at Exeter. The Chairman of our Sanitary Committee there read a telling paper on "Leicester and Small-Pox: Thirty Years' Experience." It was devoted very largely to the "Leicester Method."

The opinions expressed are all the more forceful, because, as will be seen from the following excerpts, he cannot be regarded as an anti-vaccinator. In his preface he says:—

"The generally accepted opinion of the medical profession is that vaccination and revaccination are the only protection against the spread of the disease, and that the vaccination of infants ought to be compulsory in order to ensure the public safety, and get rid of this most loathsome complaint. I am far from saying that vaccination is a delusion, but the experience of Leicester during the past thirty years has been unique, and shows that compulsory vaccination is not essential for the effectual control of

"small-pox, for, despite the neglect of vaccination, the authorities here have been successful in stamping out numerous outbreaks of small-pox, the deaths from the disease have been very few, and the expense involved, when compared with that in other well-vaccinated towns, has been trifling."

Having playfully alluded to the reputation Leicester has acquired on account of its notorious opposition to vaccination, Alderman Windley proceeds :—

"What has been the consequence of the neglect of vaccination on the health of the town, especially when small-pox appeared? It was quite expected by the medical profession that once we had the horrible disease imported, our population would be decimated by it—it would spread like wild fire; and many were the prognostications as to what would happen, uttered, not only by medical men in various parts of the country, but by one of our Medical Officers of Health, who came to Leicester after our method of dealing with small-pox had been initiated."

After dealing briefly with the various outbreaks of small-pox, and referring to quarantine, he says :—

"In certain cases where it was thought advisable that the 'contacts' should stay away from work, information was given to employers, and the Sanitary Committee awarded these persons various sums to make up in part for loss of wages. This plan has proved satis-

"factory, and is being pursued at the present time.

"The facts of Leicester briefly summed up then, are, that whereas in 1872, when the Anti-Vaccination Movement had scarcely been heard of, and when Leicester was looked upon as a well-vaccinated town, there were 346 deaths from small-pox, and during that severe epidemic a hospital was built, after plans adopted in London at that time. How many cases there were it is impossible to say, but probably several thousand. In the years that followed, faith in vaccination was weakened, and the movement against compulsion became so strong that many persons suffered imprisonment rather than pay fines, and many others had their goods seized and sold on account of their refusing to have their children vaccinated. I have quoted from the reports of our Officers of Health as to what they expected would happen, say, in ten years from 1886. During that period the number of children vaccinated was reduced until it was down to less than two per cent. of the births. We have seen how each successive outbreak was controlled, and the disease was stamped out. The fears expressed by the medical profession have not been realised, the Nemesis has not overtaken us. It is not surprising, therefore, that the feelings of the people on the subject of vaccination should remain virtually unchanged."

Alderman Windley then refers to the various sanitary measures carried out, including sewerage, new paving, flood prevention works, the

provision of public baths and parks, and the erection of a new Isolation Hospital and a Small-Pox Hospital, and continues :—

"The result of these various measures, involving as they have done the expenditure of great sums of money, is that we can claim to be one of the healthiest manufacturing towns in the country. Our death-rate, which in 1872 was 26.95 per 1,000 per annum, was in 1901 15.71.

"These facts must be left to speak for themselves. I have not entered upon the merits or demerits of vaccination, because, as I have said, we have had as a Sanitary Authority to act upon independent lines. Our experience has fully confirmed the opinion expressed by Dr. Johnston, and which I gave myself when before the Royal Commission on Vaccination, which will be found in the published Report of the Commission. I do not see why the plan adopted in Leicester of dealing with outbreaks of small-pox should not be equally successful in every other large town where good sanitary conditions are maintained. And although my opinion met with little apparent favour with the Commission, I was pleased to hear the other day from Dr. Priestley, the Medical Officer of Health for Lambeth, Chairman of the London Society of Medical Officers of Health, that our methods have been largely followed in the Metropolitan boroughs during the recent terrible epidemic of small-pox in London, with gratifying results. I agree with our present Officer of Health, Dr. Millard, that our experience in any case goes to show that compulsory vaccination, against

"which our people have so strongly protested, is
 "unnecessary wherever the Public Health Acts are
 "efficiently carried out, and where on the first
 "appearance of small-pox the Leicester methods
 "are adopted. On the question of vaccination, as
 "upon others of importance to the moral and
 "physical well-being of the people, I would say,
 "'Let every man be fully persuaded in his own
 "mind."

Well might Alderman Windley conclude his paper by asking the medical profession if "the
 "evils which they conscientiously believe would
 "follow the absence of vaccination in a great
 "manufacturing town like Leicester have not been
 "experienced? They may fairly be asked to
 "consider whether the time has not arrived
 "when they can give a little credit to Leicester
 "for what they have done in stamping out
 "repeated outbreaks of small-pox, and for being
 "the first to set an example of the most suc-
 "cessful methods of dealing with this loathsome
 "and terribly infectious disease, which has since
 "been followed by nearly all the great towns of
 "the country."

I have quoted at considerable length from Alderman Windley's pamphlet because of his unique position as the oldest and most experienced Chairman of a Health Committee in the Kingdom. Having occupied that office continuously for thirty-five years, and holding independent views on vaccination, no man can speak with weightier authority. Yet, in the discussion which followed, Dr. Hope, Medical Officer of Health for Liverpool, said Leicester had been

"very fortunate," but so little did he realise the important facts which had been enumerated that he fatuously "urged the authorities of this town (i.e., Leicester) not to rely too much upon their admirable sanitary condition, and cast aside vaccination, which is," he said, "the only safeguard." A West Ham doctor said that "all the Leicester experience proved was that if a man was put in a glass case in a museum he was not likely to be run over in the street."

Such observations confirm the statement of Sir Henry Littlejohn, of Edinburgh, who told the Congress at Exeter that the medical profession had all along shown the strongest opposition to sanitary reform. This declaration provoked indignant protests, but Sir Henry retorted that they knew it was true, and it ought to be made known. Of course, Sir Henry spoke as a Medical Officer of Health.

CHAPTER LXXXVII.

THE MEDICAL OFFICER OF HEALTH FOR LEICESTER ON THE "LEICESTER METHOD."

DR. C. KILLICK MILLARD, M.D., D.Sc., D.P.H., M.O.H. for Leicester, read a paper on "The Leicester Method of Dealing with Small-Pox," before the Incorporated Society of Medical Officers of Health, on 11th March, 1904, and this was published in "Public Health" for July, 1904. From this I take the following extracts:—

"Objection is sometimes taken to the term
" 'Leicester Method' as applied to small-pox
" prevention, on the ground that there is nothing
" sufficiently distinctive in the method of con-
" trolling small-pox in Leicester to warrant the
" assumption of a distinctive title.

"The term, however, has found its way into
" literature; . . . and inquiries with reference
" to it are not infrequently received. I feel
" justified, therefore, in helping to perpetuate the
" term in the title of this paper.

"There is a very good reason why the
" 'Leicester Method' is so often quoted by those
" who are opposed to compulsory vaccination;
" for the essential characteristic of the 'Method'—
" that, indeed, which constitutes its most distinctive
" feature—is that it professes to suffice for the

"control of small-pox without resort to universal vaccination, the one measure which is regarded as all-important in most places.

"It follows from this that any discussion of the 'Leicester Method' must necessarily involve the question of the practicability or otherwise of dispensing with universal vaccination.

"I am aware that this opens up a highly controversial subject. . . . It is desirable, however, that the question should be discussed, for the epidemic of small-pox which occurred in Leicester last year, and which was successfully controlled by the 'Leicester Method,' constituted a fresh test of the efficacy of the 'method,' and throws some additional light on the subject."

Curiously enough, he follows that statement with :—

"I will say at once that I regard it as absolutely proven that the operation of vaccination confers on the individual complete, though temporary, protection against small-pox, and I accept, without reservation, the finding of the Royal Commission on Vaccination as to the duration of this protection."

This appears to me to be somewhat contradictory, for the Commission did not consider anything absolutely proven, but only "thought" vaccination "might" confer protection for "nine or ten years."

Referring to the direful prophecies about Leicester, he remarks :—

"In accordance with the accepted theory that the vaccinal condition of a community is the

"predominant factor in determining the incidence
 "of small-pox, prophecies have been freely made
 "as to the disastrous results which would speedily
 "follow on what the late Mr. Ernest Hart called
 "Leicester's 'gigantic experiment.' Retribution,
 "in the shape of a dire epidemic and a terrible
 "'massacre,' especially of the children, has
 "been repeatedly and confidently foretold. The
 "highest authorities shared in these gloomy
 "forebodings. Thus McVail, in his 'Vaccination
 "Vindicated' (published 1887), wrote as follows:—
 "'The 'immunity of Leicester' from small-pox
 "'is an everyday subject of anti-vaccinating
 "'gratulation. But . . . in Leicester, when
 "'its time arrives, we shall not fail to see a
 "'repetition of last century experiences, and cer-
 "'tainly there will afterwards be fewer children
 "'left to die of diarrhœa. It is to be hoped that
 "'when the catastrophe does come, the Govern-
 "'ment will see that its teachings are duly
 "'studied and recorded.'

"It is unnecessary to enlarge further upon
 "this aspect of the case. It is a mistake either
 "to prophesy or to scoff at prophecy. It was
 "desirable, however, to make some reference to
 "it, for the fact that these prophecies, which
 "were first made nearly twenty years ago, have,
 "as yet, been unfulfilled, is one of the strongest
 "reasons for re-examining the question of the
 "influence of the vaccinal condition of a com-
 "munity in determining small-pox incidence."

Dr. Millard gives an insight into the valuable
 evidence which the experience of Leicester affords
 when he says:—"Leicester, by abandoning vac-

"cination, has performed a 'control' experiment
 "of some value in considering the influence of
 "vaccination in other parts of the country. It is
 "clear that the decrease of small-pox mortality
 "in Leicester cannot be ascribed to systematic
 "vaccination or revaccination of the inhabitants."

Alluding to quarantine, he says:—

"The abandonment of vaccination a few years
 "later, and anxiety to escape the predicted
 "'retribution,' led Leicester to devote special
 "attention to prompt notification and isolation,
 "together with close surveillance of 'contacts.'
 "It was attempted, indeed, at first to isolate
 "'contacts' in hospital, and the 'Leicester
 "Method,' a term which originated about this
 "time, is still supposed by some to include this
 "measure. As a matter of fact, however, isola-
 "tion of contacts in hospital was abandoned over
 "ten years ago, as it was found to be unneces-
 "sary, and, indeed, impracticable. Experience
 "has shown that it is sufficient to keep contacts
 "under surveillance at home. . . . The essential
 "characteristic of the 'Leicester Method' is the
 "absence of compulsory vaccination of the popu-
 "lation, and the concentration of attention upon
 "those other measures—notification, isolation,
 "and surveillance of contacts—referred to above.
 "It is of some significance to note that almost
 "all towns are now attaching greatly increased
 "importance to these other measures."

Turning next to the Leicester outbreak of small-pox in 1903, he comments as follows:—
 "Leicester is a notoriously badly-vaccinated

"community, and probably contains a larger
 "proportion of unvaccinated persons than any
 "other large town." Just after Easter there was
 a "cloud burst," 53 cases occurring in one week,
 14 being notified in one day. The actual cause
 of that outburst is still a mystery, but the Doctor
 says :—

"Whatever the cause, the outburst served one
 "good purpose. Hitherto it had often been
 "alleged that the 'Leicester Method' had never
 "been adequately tested, and that Leicester had
 "always been 'lucky.' This outburst, it will be
 "admitted, I think, afforded a very severe test ;
 "157 cases occurred in four weeks in 128 houses
 "in 103 streets, from some cause or causes quite
 "beyond control, and without warning. If ever
 "the 'Leicester Method' should have broken
 "down, it was then. I do not think many
 "towns of the size of Leicester during the last
 "few years have had to deal with a much larger
 "number of cases in so short a space of time.
 "The success with which the disease was stamped
 "out is indicated by the fact that in successive
 "weeks the number of fresh cases dropped from
 "46 to 22, 14, 10, 4, 2, 1, and a fortnight later
 "none were reported. Even a so-called well-
 "vaccinated town could scarcely have done much
 "better.

"Such a result seems to indicate that, pro-
 "vided the task of stamping out small-pox is a
 "straightforward one, the 'Leicester Method,' in
 "Leicester at least, is adequate for the purpose
 "without recourse to universal vaccination.

"The experience of Leicester seems to show that, provided cases of small-pox are promptly recognised and reported, so that modern methods of prevention can be put in operation, the disease can usually be stamped out quickly, even though the general population is largely composed of unvaccinated persons. If, however, cases are not recognised, modern measures are obviously useless, as they cannot be put into operation.

"The Danger of Unvaccinated Persons Contracting Small-Pox.—Moreover, the experience of Leicester during the recent epidemic, as in the previous epidemic* ten years ago, seems to show that where modern measures are carried out, unvaccinated persons run less risk of contracting small-pox, even in the presence of an epidemic, than is usually supposed. It was predicted that once the disease got amongst the unvaccinated children of Leicester it would 'spread like wild-fire.' I certainly expected this myself when I first came to Leicester, and it caused me much anxiety all through the epidemic. Yet although, during the ten months the epidemic lasted, 136 children (under fifteen years) were attacked, infected largely by once-vaccinated adults, it cannot be said that the disease ever showed any tendency to 'catch on' amongst the entirely

* Dr. Coupland, who investigated the 1892-93 epidemic for the R.C.V., stated (p. 3 of his report) that:—"In this epidemic, at least, the natural liability to small-pox, unaffected by vaccination, was not so great as has been supposed."

"unvaccinated child population. These 136 children lived in 73 streets, and most of them attended school. They were surrounded by other unvaccinated children, yet little or no spread resulted from them. . . . I have said enough, I think, to show that the 'Leicester Method' in Leicester has succeeded better than was anticipated."

Speaking of the cost of carrying out the "Leicester Method," Dr. Millard writes:—"What a fuss is sometimes made over a single case of small-pox; a whole district is scared about it, and if as many as half a dozen cases occur it is written up in the papers under prominent head-lines as though it were a national calamity, and serious injury to trade may easily result. The most trifling small-pox outbreak is apt, under such circumstances, to prove altogether disproportionately costly."

"There is certainly something to be said in favour of the course pursued in Leicester. During the whole of the recent epidemic, with the one exception of the Easter outburst (when things certainly did look serious for a few weeks), there was nothing approaching public alarm, and I believe the trade of the town was quite unaffected. The money cost of the epidemic to the rates, I estimate at about £2,300, probably not much more than would have to be spent *every year* on vaccination if vaccination and re-vaccination were systematically carried out on the whole population, though in the latter case no expense would be entailed for the upkeep of the small-pox hospitals."

Dr. Millard was incorrect respecting the cost. As I show elsewhere, he seriously over-rated it. The cost of an epidemic cannot possibly be more than the excess of actual expenditure over the normal expenditure, had there not been any small-pox outbreak. He also omits to state that the "fuss" over a single case, or few cases, of small-pox always arises from professional pro-vaccinists, and usually results in an epidemic of vaccination, yielding a golden harvest to the profession.

Dr. Millard says :—

"In conclusion, I wish to suggest that if the "Leicester Method,' after all possible improvements have been effected, could be made sufficient for the control of small-pox without resort to universal vaccination, then it would have to be regarded as a higher and more ideal method of disease prevention, and one more in keeping with the principles of true preventive medicine than is the present system of preventing a little small-pox by the substitution of a great deal of vaccinia."

In a postscript, the Doctor adds :—"Others besides myself incline to the view that it might be possible to control small-pox effectually without recourse to compulsory vaccination." If this is the Doctor's view, it is a great pity that he ran counter not only to his own ideas, but to the general feeling in the town, by "persuading" a number of reluctant people to submit to vaccination—which, in this postscript, he boasts of having done. It was no part of his duty to waste his valuable time on this fruitless errand, when all

his energies were required, and should have been directed to the control of the small-pox epidemic then prevailing. The temper of the Sanitary Committee was sufficiently indicated by the following resolution which was moved, and only withdrawn on the Doctor undertaking to desist from his provocative and unwise procedure:—

“That this Committee expresses its strong dis-
 “approval of the methods adopted by its officers
 “to obtain the vaccination and revaccination of
 “small-pox contacts, and of patients at the hospital,
 “especially the exhibition of photos of a repulsive
 “and misleading character for this purpose, and
 “it further disapproves the practice of using
 “coercive threats such as have been resorted to,
 “as being opposed to the preponderance of public
 “opinion in the town, and contrary to the wishes
 “of the Sanitary Committee.”

Again I quote from Dr. Millard's paper:—“I
 “would say here that from what I have myself
 “seen of vaccination in Leicester, I cannot quite
 “regard it as the trifling operation so many
 “medical men appear to think it. It constitutes
 “a very definite, though usually only temporary,
 “interference with health, and occasionally it is
 “responsible for much more serious ill effects.”

“If the advantages of revaccination to a
 “community prove to be as great as it is hoped,
 “it is reasonable to think that most communities,
 “from motives of self-interest, would gradually
 “come to adopt it, and the law could then be
 “made general with a minimum of friction and
 “opposition. In the meantime those communities

"who were in favour of revaccination, being themselves protected, would suffer little from the neglect of it elsewhere."

I quite agree with this, but the whole article is curiously contradictory, and affords an interesting commentary on the idiosyncrasies of human nature. After what he has said about revaccination, Dr. Millard might as well adopt the formula of Mr. Alfred Milnes, M.A., F.S.S., which puts the case in a nutshell:—

"Vaccination either (1) protects you from taking small-pox; or (2) mitigates it when you have taken it; or (3) does neither of these things.

"Now, if it neither protects nor mitigates, then it is useless, and everyone will admit it ought not to be enforced by law.

"If it only mitigates, then, since the mildest small-pox is admittedly as contagious as the most severe, vaccinated small-pox is no less dangerous to the community than unvaccinated; therefore there is no reason, and therefore no right, to enforce vaccination by law.

"If the doctrine is that it protects you from taking small-pox, those who believe this doctrine will go and be vaccinated, and then, being themselves safe, have no reason, and therefore no right, to enforce vaccination upon others by law."

If Dr. Millard would take up this attitude, he would at once occupy a position both logical and impregnable.

PART XI.

SUPPLEMENTARY EVIDENCE AGAINST VACCINATION.

CHAPTER LXXXVIII.

VACCINATION AND SYPHILIS AT LEICESTER.

WHY Leicester—which has formulated so successful and reasonable a method of dealing with small-pox, that it is now adopted almost universally—should be contemned, and made the butt of pro-vaccinists, is difficult to surmise, except on the ground that the irrefutable facts of its complete success in coping with small-pox outbreaks have entirely upset the old accepted theory of vaccinal prophylaxy.

However this may be, a calumnious attack was made upon Leicester in 1898, during a debate on the Vaccination Bill, which was then before the House of Commons. Sir W. Priestley said:—
“There is one very curious fact which I should mention to the House. Both erysipelas and syphilis produced a higher mortality at Leicester than in England and Wales generally, where vaccination was practically discontinued.” (Par-

liamentary Debates—Authorised Edition—revised by Sir W. Priestley.)

The statement (based upon Dr. Ogle's erroneous Table C, page 646, Royal Commission, Sixth Report) is peculiarly contradictory and ungrammatical, but its intention is apparent. The imputation is, either that Leicester people were more immoral, or that the absence of vaccination did not prevent an increased fatality from erysipelas and syphilis, and, *per contra*, that such fatalities were not attributable to vaccination. Erysipelas has been already separately dealt with, but soon after this debate in Parliament, I published the following table, showing the death-rates from syphilis and erysipelas for Leicester only, and also from the two diseases together:—

TABLE 30.

Being Table A, page 39, "Vaccination Inquirer," June, 1898.

Table showing, for the BOROUGH OF LEICESTER, for each of the periods 1882-85, 1886-89, 1890-93 the average annual death-rate, from Syphilis and Erysipelas, of children under one year of age per million births; with the average annual percentage of registered vaccinations to births during each period.

Period.	Syphilis. Average Annual Death-Rate under 1 year per 1,000,000 Births.	Erysipelas. Average Annual Death-Rate under 1 year per 1,000,000 Births.	Syphilis and Erysipelas. Average Annual Death-Rate under 1 year per 1,000,000 Births.	Average Annual Percentage of Registered Vaccinations to the Total Births.
1882-85	1,588	9,300	10,888	45·1
1886-89	1,563	4,700	6,263	10·8
1890-93	1,404	2,100	3,504	2·7

These figures show that a decided and even emphatic decrease of the death-rate from both syphilis and erysipelas corresponds with the lessened amount of vaccination in Leicester. A few extra deaths happening just prior to the date of Sir William's speech, fatuously induced him in his zeal for vaccination, to decry Leicester according to the prevailing fashion.

Great care is needed in dealing with statistics relating to syphilis, as, owing to the comparatively few deaths which occur, it is necessary to take the rates either per million population, or per million births. Only one additional death during a year in Leicester, would send up the population death-rate by nearly five per million, and the "births" death-rate by nearly 200 per million. It is, therefore, much fairer to take a range of years.

For this disease (syphilis), a relatively small population, like that of Leicester, does not afford a sufficiently broad and stable factor to base reliable calculations upon, such as may be founded upon the much larger numbers represented by the births, or the population of England and Wales.

For instance, in 1890 there were, in Leicester, 11 deaths under one year from syphilis, giving a death-rate of 2,343 per million births, whereas in 1901 there were only 3 such deaths, giving a death-rate of only 486 per million births. These are the highest and lowest death-rates from 1888 to 1910, and show the tremendous variation which may arise in a limited-population area, the

difference in this instance being no less than 1,857 per million.

The greater population of England and Wales provides, therefore, a more constant factor. The highest year, 1890 (one of three all alike), gives a syphilis death-rate of 1,700 per million births, whereas the lowest year, 1902, has a death-rate of 1,188 per million births, the variation being only 702 per million births.

Spreading these rates over quinquennial periods, we get a more equitable comparison, which is not unfavourable to Leicester.

TABLE 31.

Average annual death-rate under one year of age, from Syphilis, per million births, and average annual percentage of registered vaccinations to births.

	1888-92.	1893-97.	1898-02.	1903-07.	1908-10.
Leicester—					
Syphilis death-rate . .	1,560	1,711	1,124	1,196	1,024
Vaccinations per cent. .	3·4	2·1	8·2	23·5	11·4
England and Wales—					
Syphilis death-rate . .	1,720	1,400	1,238	1,295	1,208
Vaccinations per cent. .	78·0	67·8	68·5	76·2	60·8

What could be more significant and conclusive than the plain fact, shown in this table, that the increased vaccinations for 1903-07 arrest the gradual decline of the death-rate of infants from syphilis, which was then taking place, not in Leicester only, but also all over England and Wales? These figures furnish further proof that increased vaccination contributes an increased

number of deaths, and in this instance from the most abhorrent and terribly debasing disease of fallen humanity, and for which the poor, innocent, hapless, infantile victims could not in any way be held responsible. Moreover, the new "brand" of calf lymph, which is supposed to be free from syphilitic taint, was coming more fully into use in 1898, and since that date its use has been practically universal. Pro-vaccinists have made a desperate attempt to ward off the growing evidence which has been accumulating, against the "new" vaccination, but it has proved unavailing.

CHAPTER LXXXIX.

THE ROYAL COMMISSION ON SYPHILIS AND OTHER DISEASES AT LEICESTER.

THE Royal Commission, in combatting the objections to vaccination, on the ground of injurious effects resulting therefrom, say, *inter alia*:—"The admission, therefore, that some risk attaches to the operation of vaccination, an admission which must without hesitation be made, does not necessarily afford an argument of any cogency against the practice ; if its consequences be on the whole beneficial and important, the risk may be so small that it is reasonable to disregard it." (Paragraph 379, Final Report.)

This sentence fitly represents the spirit, and sense of morality, with which the Royal Commission approached and performed its task. If vaccination were optional, its risks would also be optional, and there might be some reason in the argument. When we remember that thousands of parents, whose children have been injured or killed by vaccination, were compelled by law to incur these risks for their children, then the gross impropriety of such a statement becomes apparent.

The first specific disease considered by the Royal Commission, as to the injurious effects of vaccination, was that of syphilis, as it affects the mortality of children in the earlier months of the first year of life. The Commissioners allege that, in the mortality for England and Wales, there is not the slightest sign of this cause operating, but the figures they adduce appear to me to contradict their own argument. They point out

that although the vaccination age was then three months, very few infants were vaccinated until after that age, and that a later age would, therefore, be more likely to show the effect of syphilitic invaccination. This is exactly what happened with the 205 cases investigated for the Commission. Of these 205 infantile deaths from syphilis, they say :—"In the case of 158 of these, the age exceeded three months ; "in the majority, it was over four months." It is true that, as the Commission state, the greatest increase in infantile deaths from syphilis was in the first three months of life ; but, on the other hand, they do not, and cannot, deny that an increase also occurred in the later age periods.

After dealing with Scotland and Ireland, they proceed to make certain adverse comparisons between Leicester and England and Wales, with respect to the deaths under one year from syphilis, erysipelas, scrofula, diarrhoea, and bronchitis, as between the two periods, 1863-67 and 1883-87.

From all these diseases, excepting *tabes mesenterica* and *scrofula*, it was made to appear that the death-rate of infants in Leicester increased at a much higher ratio than in England and Wales. Later on, I show how erroneous were these conclusions.

The Commissioners say :—"Further evidence "on the same point, of great importance, is "afforded by a consideration of the statistics "showing the deaths from syphilis under one "year of age per million births in Leicester on "the one hand, and in England and Wales on

"the other. The Registrar-General has supplied us with the means of comparing the deaths in the period 1863-67 with those in the period 1883-87."

The Commissioners proceed to observe that, although this test may be between an urban population (Leicester) and one both rural and urban (England and Wales), this "does not appear to us materially to vitiate the comparison." (See paragraphs 386 to 398, Final Report, Royal Commission on Vaccination.)

Had either the Royal Commission or the Registrar-General taken the trouble to consider carefully the statistics of Leicester, they would have found their conclusions to be exceedingly doubtful; but, whether they were right or wrong, how is it that the Royal Commission ventured to compare so unfairly one town, like Leicester, with England and Wales for syphilis and erysipelas, when, as I have already shown, even only a single death, more or less, in Leicester would materially affect the relative result? How is it that the Royal Commission, after decrying the comparison of large with small and differently constituted communities, when they find (or think they find) that it tells against Leicester, resort to a practice which they denounce and condemn? How is it, also, that while clutching at these straws, like drowning men, and regarding the evidence of Leicester on this point as final and conclusive, they pay no heed whatever to the much greater mass of overwhelming and unanswerable evidence which Leicester has adduced against vaccination? If it was not their strong prejudice

against Leicester, what was it that led to this anomalous result?

Why, also, did they not mention, that in these very periods which they (or someone in the Registrar-General's office) selected for comparison, the children's death-rate, under five years of age, from all causes at Leicester had gone down from 99 per thousand living at that age in 1863-67 to only 76 per thousand living at that age in 1883-87? Again, why omit the facts that the all-age death-rate from diarrhœa—nearly all infantile—had fallen from 2,374 per million in 1863-67 to only 1,734 per million in 1883-87, whilst the death-rate at all ages and from all causes went down no less than 6 per thousand from 1863-67 to 1883-87? These remarkable figures much more than counter-balance those produced by Dr. Ogle, and prove conclusively that the collation professedly made by the Royal Commission was a mere figment, and, as we shall see, this incident exposed the unworthy methods by which they arrived at conclusions supposed to be adverse to Leicester.

Had the Commission referred to the facts now enumerated, and emphasised them still further by pointing out that those reductions were effected principally by the decline in the Leicester children's share of the death-rate, we should have felt that they were, at least, attempting to discharge their duties impartially. Instead of that, their treatment of this subject is one of the most flagrant instances of their strong and prejudiced partiality and one-sidedness where Leicester was concerned.

The Royal Commission appear in their Final

Report to be so jubilant with having discovered something to allege against Leicester that they not only devote several paragraphs to the subject (Paragraphs 390-397), but, in reference to tabes mesenterica and scrofula, they say:—"On this point again it is useful to resort to the experience of Leicester." (Paragraph 396.)

The table upon which all these animadversions were grounded is here produced:—

TABLE 32.

Being Dr. Ogle's Table C, page 646, Sixth Report of Royal Commission on Vaccination.

Deaths under one year of age, from certain causes, per million births in LEICESTER and in ENGLAND AND WALES in the periods 1863-67, 1873-77, and 1883-87, and increase or decrease per cent. in the last twenty years.

Disease.	Name.	Period. 1863-67.	Period. 1873-77.	Period. 1883-87.	Increase or Decrease per cent. in 20 years.
Diarrhœa and Dysentery.	Leicester.	42,627	48,594	44,409	4.2
	E. and W.	14,908	15,975	14,983	0.5
Syphilis.	Leicester.	988	1,371	1,673	69.3
	E. and W.	1,511	1,754	1,884	24.7
Erysipelas.	Leicester.	680	1,724	962	41.5
	E. and W.	750	878	625	- 16.7
Tabes Mes- enterica and Scrofula.	Leicester.	4,819	6,013	6,064	25.8
	E. and W.	4,553	5,418	5,772	26.8
Bronchitis.	Leicester.	9,452	12,734	20,114	112.8
	E. and W.	10,458	15,922	18,125	73.3
All other Causes.	Leicester.	153,580	140,565	132,892	- 13.5
	E. and W.	122,554	108,328	101,770	- 17.0
All Causes.	Leicester.	212,146	211,001	206,114	- 2.8
	E. and W.	154,734	148,285	143,159	- 2.5

In the succeeding chapter, I examine how far the Royal Commissioners were led astray by these apparently authoritative and conclusive figures.

CHAPTER XC.

LEICESTER'S TRADUCERS UNMASKED.

DR. OGLE, who handed in Table C, page 646, Royal Commission, Sixth Report, upon which the Royal Commissioners' criticisms of Leicester are founded, has not furnished the actual figures upon which the calculations in the table are based, so that its accuracy might be tested. Moreover, the years comprising the periods seem to have been arbitrarily selected for a specific purpose; they are not the customary quinquennial periods used by the Registrar-General. The usual years would be 1861-65, 1871-75, and 1881-85; instead of which, 1863-67, 1873-77, and 1883-87 were resorted to. Why have the actual figures been withheld, and why were these particular years selected? Dr. Ogle's examination on this table will be found at pages 407-8 and Questions 27,197 to 27,209, Sixth Report of the Royal Commission. When asked by Dr. (now Sir William) Collins (Question 27,203) whether he had made a similar comparison with other towns than Leicester, Dr. Ogle excused himself by replying:—"No. . . . such abstraction is a very laborious piece of work."

That the Dissentient Commissioners viewed the table with great mistrust is shown in their Report, for they say, in paragraphs 181 and 182:—

"We are not prepared to attach much weight to figures put in by Dr. Ogle, instituting a comparison between Leicester and the whole of England and Wales in regard to the changes in the infantile mortality from various diseases.

“To make such comparison valuable it would be,
“as Dr. Ogle seemed inclined to admit, better to
“compare an urban population similar to that of
“Leicester, but in which vaccination was thor-
“oughly carried out. If we want to ascertain
“by the method of differences whether vaccina-
“tion exerts a detrimental effect by increasing
“the mortality from certain infantile diseases, it
“is surely imperative to see that the places or
“times compared differ as little as possible in
“respect of circumstances other than vaccination.

“In the statistics which Mr. Biggs furnished,
“we do not find any evidence that the increasing
“disuse of infantile vaccination in Leicester has
“prejudicially affected the mortality of young
“children; on the contrary, there has not only
“been a marked reduction of the general death-
“rate since 1875, but a reduction in the death-rate
“of infants under one year—a rate which reached
“its highest point since 1838 in the period 1868-72,
“when vaccination was most thoroughly enforced.”

For myself, I have all along entertained grave doubts as to the accuracy of the figures in this table, as all the circumstances connected with its preparation and production were calculated to arouse suspicion. I therefore wrote to the Registrar-General, asking him whether he could furnish the figures upon which Dr. Ogle's table was based, or otherwise inform me where they could be found. In reply, he gave no clue, but merely referred me to Dr. Ogle's table, stating that the figures were now over twenty years old, and would occupy more time than could be spared to look up. I then tried to obtain

the information from a member of the Royal Commission, but he was unable to furnish the required figures, as only the results, and not the figures upon which those results were based, had been given to the Royal Commission.

Under these circumstances, I turned to our local records, and found that it was possible to obtain from our Medical Officers' reports the requisite numbers for Leicester for the last period in Dr. Ogle's table—viz., 1883-87. They differ so materially that I give both the actual figures and the results they produce. These not only entirely undermine Dr. Ogle's table, but also all the criticisms based thereupon which were levelled by the Royal Commission against Leicester.

TABLE 33.

Table showing, for the BOROUGH OF LEICESTER, from 1883-87, the actual number of deaths under one year of age from Diarrhœa and Dysentery, Syphilis, Erysipelas, Tabes Mesenterica and Scrofula, Bronchitis, all other causes; and from all causes, with the death-rate from each, per million births. The number of births is also given.

	Diarr- hœa and Dysen- tery.	Syph- ilis.	Ery- sipe- las.	Tabes Mesen- terica and Scro- fula.	Bron- chitis.	All Other Causes.	All Causes.	Births.
1883 . .	129	8	5	9	98	664	913	4,825
1884 . .	276	6	10	22	90	729	1,233	4,851
1885 . .	168	8	1	28	71	631	907	4,683
1886 . .	229	8	2	27	102	684	1,052	4,863
1887 . .	209	5	3	27	90	677	1,011	4,695
Totals . .	1,011	35	21	113	451	3,385	5,016	23,917
Death-rate per million births	42,270	1,463	878	4,725	18,856	141,527	209,719	

We are now in a position to compare Dr. Ogle's figures in his Table C, with the results obtained from the actual deaths.

TABLE 34.

Table showing for LEICESTER the corrections, for the period 1883-87, in the per million death-rates, and the percentages of increase or decrease, given in Dr. Ogle's Table C. (Page 646, Sixth Report, Royal Commission.)

	Diarrhoea and Dysentery.	Syphilis.	Erysipelas.	Tabs Mesenterica and Scrofula.	Bronchitis.	All Other Causes.	All Causes.
Dr. Ogle's rates per million - -	44,409	1,673	962	6,064	20,114	132,852	206,114
Corrected rates per million - -	42,270	1,463	878	4,725	18,856	141,527	209,719
Amount of Dr. Ogle's error - -	2,139	210	84	1,339	1,258	8,635	3,605
Dr. Ogle's percentage of increase or decrease	4.2	69.3	41.5	25.8	112.8	-13.5	-2.8*
Corrected percentages of increase or decrease	-0.84	48.1	29.1	-1.96	99.5	-7.85	-1.15*
Amount of Dr. Ogle's error - -	5.04	21.2	12.4	27.76	13.3	-5.65	-1.65*

* Increase or decrease in 20 years.

When I found these serious discrepancies, I made a further effort to obtain the original figures from the Registrar-General, but without avail, as will be seen from the following letters:—

GENERAL REGISTER OFFICE,
SOMERSET HOUSE,
LONDON, W.C.

11th September, 1912.

Sir,—I am directed by the Registrar-General to acknowledge the receipt of your letter of the 10th instant, and to say that he regrets he cannot comply with your request. The calculation referred to is nearly twenty years old, and either to find the original manuscript or to reconstruct the data would involve a greater expenditure of time than can be spared for the matter.

I am, Sir,

Your obedient Servant,

T. H. C. STEVENSON,
Superintendent of Statistics.

Mr. J. T. BIGGS,
49 Waterloo Street,
Leicester.

49 WATERLOO STREET,
LEICESTER,

19th September, 1912.

THE REGISTRAR-GENERAL,
Somerset House,
London.

Dear Sir,—While thanking you for your letter of 11th September, I am sorry you are unable to comply with my request. It is quite true the calculation contained in Dr. Ogle's Table C., page 646, Sixth Report of the Royal Commission, is nearly twenty years old, but that does not, unfortunately, prevent the continuance of the adverse criticisms of Leicester, which are based upon this Table.

On investigating the last period—namely, 1883-87—and comparing with the figures in our Medical Officer's Health Reports for these years, serious discrepancies are revealed, which not only vitiate Dr. Ogle's conclusions, but disclose errors of such dimensions as to make the Table valueless.

For instance, the errors in the per million rates as between the first (assuming this to be correct) and last period, when corrected, are 2,139 per million for Diarrhoea and Dysentery, 210 per million for Syphilis, 84 per million for Erysipelas, 1,339 per million for Tabes Mesenterica and Scrofula, 1,258 for Bronchitis, 8,635 for All Other Causes, and 3,605 for All Causes.

The errors for the percentage increase or decrease are shown to be:—Diarrhoea and Dysentery, 5.04; Syphilis, 21.2; Erysipelas, 12.4; Tabes Mesenterica and Scrofula, 27.76; Bronchitis, 13.3; All Other Causes—5.65; and All Causes—1.65.

I enclose the actual figures and the calculations based thereon, and shall be glad if you will kindly point out the errors or discrepancies, if any, in these figures, as I am anxious not only to have them correct, but to avoid doing any injustice to Dr. Ogle by their publication.

Yours faithfully,

J. T. BIGGS.

GENERAL REGISTER OFFICE,
SOMERSET HOUSE,
LONDON, W.C.

25th September, 1912.

Sir,—I am directed by the Registrar-General to acknowledge the receipt of your letter of the 19th instant, and to say that, owing to the pressure of current work, time cannot be spared to investigate the figures furnished therein. Moreover, the Registrar-General cannot admit that a discrepancy between the returns compiled in this Office and those prepared by a Medical Officer of Health imply an error in the former equal to that discrepancy.

I am, Sir,

Your obedient Servant,

T. H. C. STEVENSON,
Superintendent of Statistics.

Mr. J. T. BIGGS,
49 Waterloo Street,
Leicester.

On comparing the preceding tables, it will be seen that the increase or decrease between the first and last periods in Dr. Ogle's table is not only incorrect for each of the diseases dealt with, but all these errors, excepting one, are used to tell against Leicester.

For "Diarrhœa," the disease to which the infantile population of Leicester is specially liable, instead of an increase of 1,782 per million in the death-rate, there is an actual decrease of 357, or an error of no less than 2,139 per million.

For "Syphilis," Dr. Ogle gives the increase in the death-rate as 685 per million, whereas it was only 475, an error of 210 per million.

For "Erysipelas," the actual increase in the death-rate was 198 per million, and not 282, as given by Dr. Ogle, or an error of 84 per million.

For "Tabes Mesenterica and Scrofula," Dr. Ogle gives an increase of 1,245 per million, whereas there was an actual decrease of 94, an error of 1,339 per million.

For "Bronchitis," the increase was 9,404 per million, and not 10,662, as given by Dr. Ogle, an error of 1,258 per million.

For "All Other Causes," Dr. Ogle shows a decrease in the death-rate of 20,688 per million, instead of only 12,053, an error of no less than 8,635 per million.

For "All Causes"—that is, the deaths of infants under one year of age from all causes, per million births—Dr. Ogle shows a decrease of 5,032 per million, whereas it should be 2,427, or an error of 3,605 per million !

Dr. Ogle's percentage death-rates for Leicester are, as a natural sequence, equally faulty. There is an error of over 5 per cent. in the death-rate for "Diarrhoea"; of 21.2 per cent. for "Syphilis"; of 12.4 per cent. for "Erysipelas"; of 27.76 per cent. for "Tabes Mesenterica and Scrofula"; of 13.3 per cent. for "Bronchitis"; of 5.65 per cent. for "All Other Causes"; and of 1.65 per cent. for "All Causes."

These results are obtained from testing a single period for Leicester only, and from but one-sixth of the figures in the whole table. If, on investigation, so small a portion is found to contain all these blunders, what does it matter whether they tell for or against Leicester? In either case, the table and the arguments based thereon are shattered!

After this, it would not be unreasonable to expect that other parts of Dr. Ogle's table would prove to be equally vulnerable, and, if submitted to a similar test and process of disintegration, the probable result is that very little, if anything, would be left of the Royal Commission's indictment against Leicester. This is the more likely when we bear in mind that the decrease in the all-age and all-cause death-rate of England and Wales, from the year 1863 to the year 1887, was only 3.9 per thousand, whilst that of Leicester for the same period was 10.9 per thousand, showing a gain in favour of Leicester of no less than 7 per thousand.

This notorious table of Dr. Ogle's was produced under the auspices of the then Registrar-General,

for the especial purpose of enabling the Royal Commission to strike a blow at Leicester. It seems almost incredible that the Royal Commission should not only accept it without adequate examination, but proceed so eagerly to build up on this sandy foundation their chief—indeed, I may say their ONLY—indictment of Leicester. As a statistical fabric, the table is smashed to atoms. Henceforth it must take its appropriate place, side by side with the “Ceara” fable and the “Franco-German” Army statistical fraud.

CHAPTER XCI.

THE DISSENTIENT COMMISSIONERS ON VACCINATION AND SYPHILIS.

THE Royal Commission did not, in my opinion, treat the subject of Vaccino-Syphilis with the seriousness it deserved. They passed it lightly by as being almost too infinitesimal for their notice. I am glad, therefore, that the Dissentient Commissioners, in the Minority Report, gave it more serious consideration. They point out that it is not necessary for all co-vaccinees to be infected, for proof of the infection of some of them. (Paragraph 199.) That, although at the time of the promulgation of the German Vaccination Law the opinion prevailed that there was no danger attendant on vaccination, this view soon received refutation, and "up to the year 1880, "50 cases became known in which syphilis "inoculated with the vaccine caused illness to "about 750 persons." (Lotz, on "Small-Pox and Vaccination," 1880, page 113.) (Paragraph 200.)

The Dissentient Commissioners, in paragraph 202, state that they agree with their colleagues "that the possibility of vaccine syphilis, formerly "denied, has been fully established."

In paragraph 201, they point out that:—"In "regard to vaccine syphilis, in the pamphlet "revised by the Local Government Board, and "until recently widely circulated, it was stated :

" 'The fear that a foul disease may be implanted "by vaccination is an unfounded one. Such mis-

“ ‘ chief could only happen through the most gross
“ ‘ and culpable carelessness on the part of the
“ ‘ vaccinator; and as all medical men now receive
“ ‘ special training in vaccination, no risk of this
“ ‘ kind need be at all apprehended. Of course,
“ ‘ vaccination, like everything else, requires a
“ ‘ reasonable amount of care in its performance.
“ ‘ *The alleged injury arising from vaccination is,*
“ ‘ *indeed, disproved by all medical experience.*

“ It was not only maintained that care could
“ prevent all ill results, but it was asserted on
“ high authority that a ‘well-formed vaccine
“ vesicle is certain proof of a pure and unmixed
“ vaccine lymph’; that a syphilitic vacciner
“ must betray evidence of disease sufficient to
“ forewarn the careful, and it has been stoutly
“ maintained that it was the presence of blood
“ in the lymph that occasioned the danger of
“ transmitting syphilis, and that as all lymph
“ sent out in tubes from Whitehall was micro-
“ scopically examined so as to exclude the
“ presence of blood cells, the danger was
“ infinitesimal.”

It is monstrous that such documents as this, containing statements well known to be false, should be published at the public expense by a Government Department.

The Dissident Commissioners, in paragraphs 204 and 205 of their Report, refer to eminent medical opinions on this subject, and quote from a joint medical report on a well-known case, in which it is stated that “it is conclusively proved
“ that it is possible for syphilis to be com-

“municated in vaccination from a vaccine vesicle
“on a syphilitic person, notwithstanding that the
“operation be performed with the utmost care to
“avoid the admixture with blood.”

In paragraph 206, they state that “Dr. Husband,
“of the Vaccine Institution of Edinburgh, has
“established the fact that all lymph, however
“pellucid, does really contain blood cells. This
“not only disposes of the theory that lymph may
“be rendered innocent of harm if blood be
“excluded, but appears to render somewhat super-
“fluous the labours of the microscopical examiner
“of lymph at the National Vaccine Establishment
“at Whitehall. Such microscopical examination
“of lymph, being directed mainly to the exclusion
“of that which according to Dr. Husband is
“omnipresent, and being admittedly insufficient
“to detect and identify micro-organisms of patho-
“genic nature, it is not surprising that it affords
“no guarantee of the purity of lymph.”

The Minority Report contains several other paragraphs devoted to this important subject, but as these enter into the question of “calf lymph,” I refer to them elsewhere.

It is known, and, indeed, is not disputed, that symptoms indistinguishable—to the most experienced and practical eye—from those of syphilis may result from the use of “calf lymph.” Therefore, it seems probable that this dreaded malady, or, as Dr. Creighton says, “the same sort of thing,” will continue to spread its blighting effects, even with the introduction of the new virus, known by the name of “glycerinated calf lymph.”

CHAPTER XCII.

PROFESSIONAL OPINION ON THE INVACCINATION OF SYPHILIS.

At one time the invaccination of syphilis was thought to be impossible. No one disputes it now—the proofs are too overwhelming; they are so widespread. How easy it is to convey syphilis by means of vaccination was shown in 1800-02, several cases being on record as having occurred at that early period. Nevertheless, a few medical opinions and extracts from medical journals might be given in further substantiation of the horrible truth.

Dr. (now Sir) W. J. Collins, B.Sc., M.B., B.S., M.R.C.S., writing from St. Bartholomew's Hospital, 10th September, 1881, says that although "in 1805 an anti-vaccinator, Dr. Moseley, discovered that syphilis was communicable by vaccination, it was not till seventy years later that the majority of the profession were convinced of the fact." He mentions a number of eminent men who have averred their belief in this "ghastly risk," including "Sir Thomas Watson, Professor Ricord, Dr. Trousseau, Mr. Jonathan Hutchinson, Mr. Simon, Dr. Ballard, Mr. Lane, and a host of other distinguished syphilographers." He states that more than 700 instances of vaccino-syphilis are now on record,

and that "pathology has taught us long since that
"syphilis may be conveyed by infected blood, or
"the secretions which are its offspring. Statistics
"complete the evidence by showing that the
"deaths from infantile syphilis per million births
"were under enforced vaccination (1867-78) 1,738,
"as compared with 564 under voluntary vaccina-
"tion (1847-53)."

In an "Essay on Vaccination," published in 1868, Dr. Ballard, who afterwards became an official Vaccine Inspector, summed up the evidence as follows :—

"(1) There are numerous cases on record to
"prove that the vaccine virus and the syphilitic
"virus may be introduced at the same spot by
"the same puncture of the vaccinating lancet.

"(2) From several instances on record, there
"can remain no reasonable doubt that the vaccine
"virus and the syphilitic virus may both be
"drawn at the same time, upon the same instru-
"ment, from one and the same vesicle.

"(3) The vesicle which is thus capable of
"furnishing both vaccine and syphilitic virus
"may present, prior to being opened, all the
"normal and fully-developed characters of a true
"Jennerian vesicle, as ordinarily met with."

The "Pennsylvania Medical Journal," September, 1871, says :—"American mothers at last are
"no more free from the plague of 'vaccination'
"than are British parents. What a prospect for
"humanity is this propagation of loathsome, con-
"tagious diseases! National virusation by a staff
"of State officers to 'preserve' the public health!

"All the vaccine virus now sold in Alaska Street, Philadelphia, is obtained from children suffering under the influence of scrofula, syphilis, or some kindred pestilence. The vaccine station is neither more nor less than a cesspool of germinal horrors."

"Some years since, some terrible cases came to light . . . which were caused by one vaccinator infecting a whole district with syphilis by vaccination. In the beginning of this year a similar misfortune occurred in the neighbourhood of Melnik, when a number of children in several districts got syphilis by vaccination, and several died of it. Such epidemics probably occur more frequently than they are described as doing. In the earlier times of the practice of vaccination, no one dared to write anything against it, and thus no means existed of obtaining a correct knowledge of conditions like these."—Josef Hamernik, M.D., Professor of the University of Prague, Bohemia, in "The History of Small-Pox and Vaccination," 1872.

"The assertion that blood only conveys the disease (syphilis) is more hypothetical than demonstrated. It is difficult to understand that what the blood serum contains, the vaccinal serum does not contain also; indeed, it is practically very difficult to take vaccine without any mixture of blood."—From the "Clinique Medicale," Vol. I., pages 116-8, by Professor A. Trousseau, M.D., late Physician to the Hotel Dieu, Paris, 1874.

"Every physician of experience has met

“with numerous cases of cutaneous eruptions, erysipelas, and syphilis which were directly traceable to vaccination, and if these could all be collected and presented in one report, they would form a more terrible picture than the worst that has ever been drawn to portray the horrors of small-pox.”—“Vaccination: Its Fallacies and Evils,” page 13, by Professor Robert A. Gunn, M.D., New York, 1877.

“Syphilitic contamination by vaccine lymph is by no means an unusual occurrence, and it is very generally overlooked, because people do not know either when or where to look for it. I think that a large proportion of the cases of apparently inherited syphilis are in reality vaccinal; and that the syphilis in these cases does not show itself until the age of from eight to ten years, by which time the relation between cause and effect is apt to be lost sight of.”—Mr. Brudenell Carter, F.R.C.S., L.S.A., Ophthalmic Surgeon to St. George’s Hospital, in the “Medical Examiner,” 24th May, 1877.

“There can be no doubt that the danger of transmitting syphilis by vaccination is a real and a very important one. . . . Until my original papers were published, almost the whole British profession was incredulous on this point; and in spite of the publicity which was then given to the facts there still remain, I believe, some who are either uninformed or unconvinced.”—“Illustrations of Clinical Surgery—Vaccination Syphilis,” by Mr. Jonathan Hutchinson, F.R.C.S., Surgeon to the London Hospital, 1877.

"I can add my testimony to that of Dr. Ange, "who was seventeen years engaged in the Isle of Wight in curing cancer, to the great increase of "cancer all over the Kingdom. This is attributed "by some medical men to the large amount of "syphilitic disease with which vaccine lymph is "impregnated ; by others to the direct impregnation of healthy persons with lymph imbued "with scrofulous and cancerous matter."—Mr. William Forbes Laurie, M.D., Edin., St. Saviour's Cancer Hospital, Regent's Park, London, in a letter to Mrs. Hume-Rothery, 3rd June, 1879.

In a paper which M. Depaul, the chief of the Vaccination Service of the French Academy of Medicine, "published in 1867, which embraced "the record of little over a year's French experience, there were enumerated half a dozen more "or less extensive outbreaks of vaccinal syphilis, "in the course of which upwards of 160 children "had been infected, and several had lost their "lives."—Address at the Calf Lymph Medical Conference, by Dr. Charles Cameron, M.P., December, 1879.

"The vaccine lymph of the syphilitic may "possibly contain the syphilitic contagion in full "vigour, even at moments when the patient who "thus shows himself infective has not on his "own person any outward activity of syphilis."—Mr. Simon, F.R.C.S., in the "British Medical Journal," 13th December, 1879.

"It is clearly proved that syphilitic blood "may convey syphilis, but it is not yet proved "that vaccination lymph from a syphilitic child,

“even though unmixed with blood, will not do so, and it would, therefore, be the height of imprudence to act on any such belief.”—
“Lectures on Syphilis,” by Mr. Lane, F.R.C.S., 1881.

The “Journal d’Hygiene,” of 25th August, 1881, reported that Dr. Desjardins, of Nice, “in a letter to the Editor of the ‘Akhbar,’ gives a complete confirmation of the syphilisation of the fifty-eight French soldiers in Algeria, on 30th December last, the particulars of which we have already set before our readers. The most cautious silence, we are informed, is preserved by the military authorities; and not without reason, if vaccination is to retain its hold on popular credulity.”

In an address delivered before the International Anti-Vaccination Congress at Cologne, 10th October, 1881, Dr. Charles Pigeon, Fourchambault (Nievre), France, established the following propositions:—

“1st.—That variola is not relatively a serious disorder, and that vaccination is no protection against it, but renders it more dangerous.

“2nd.—That vaccination exposes the vaccinated to syphilis.

“3rd.—That vaccination exposes the vaccinated to several other diseases, and is the means of exciting sundry others, the major part of which are more dangerous than small-pox.

“4th.—That vaccination is a powerful cause of the degeneration of mankind.”

“In their mischievous effects, the vaccine

“lymphs are alike, whether obtained from children or from calves. The one is too often taken from the classes subject to syphilis and scrofula, the once-dreaded ‘king’s evil’; the other is specially liable to convey lung complaint; and the peculiar morbid phenomena excited in the vaccinated patients is the compound result of whatever disease exists in their constitution, and the special fermentation caused by the addition of the vaccine complaint.”—From the closing address delivered by Dr. Hubert Boens, Charleroi, before the Second International Anti-Vaccination Congress, at Cologne, 12th October, 1881.

“Many deaths have undoubtedly resulted from vaccination, and an unknown number of children have had their constitutions cruelly injured through vaccination with lymph from a syphilitic child.”—“The Students’ Journal and Hospital Gazette,” 14th January, 1882.

The whole of this mass of medical testimony (and more) was known to the Royal Commission. Indeed, on page 617 of the Sixth Report, Mr. H. H. Taylor, F.R.C.S., handed in a table, on 4th May, 1892, which gives a list of nearly a thousand cases and deaths from the invaccination of syphilis.

Dr. W. Scott Tebb, in his exhaustive work, “A Century of Vaccination,” on pages 296, 298, and 306, gives a list of over 730, many of which are included in Mr. Taylor’s list. When all duplicates are eliminated, there remains a gruesome catalogue of nearly 1,200 cases and deaths

resulting from the invaccination of syphilis. In the Makuna Vaccination Inquiry, about forty medical men testified to having experience of syphilis from vaccination.

There are other recent cases, including the shameful Leeds case (see "Vaccination Inquirer," July, 1891, page 58), which so indelibly stamps the proceedings of the Medical Department of the Local Government Board with an infamous disregard of professional honesty. Even Mr. Jonathan Hutchinson, in a letter to Mr. Brown, of King's Lynn, dated 14th March, 1891, and published in the "Lynn Advertiser," wrote:—"During the last ten years, or, perhaps, considerably more; not a single instance of vaccination syphilis has been recorded in British practice. The risk, such as it is, is absolutely avoided by the use of calf lymph, and almost as absolutely by care in the selection of the vaccinifer."

It will scarcely be believed, but such is the fact, that at the very time this letter was penned, Mr. Hutchinson, as a member of the Royal Commission on Vaccination, not only knew of the case of Emily Maud Child, at Leeds, in 1889, but also contributed an article to No. 2 of "The Archives of Surgery," headed, "On three fatal cases of gangrenous ulceration of the arm after vaccination." This was, of course, intended only for professional consumption. He writes:—"When such symptoms as snuffles, thrush, and eruption on the genitals in infancy are mentioned, not a few will hold that the suspicion is rendered very strong, if not actually proven.

" In the same way, nodes on the head, bubo in
 " the armpit, phagedænic sores, abscesses and
 " eruptions on the genitals occurring in connec-
 " tion with a vaccination sore which has gone
 " wrong, will be held by many as conclusive
 " proofs that syphilis has been introduced. I
 " cannot but freely admit that they bring with
 " them much suspicion, and that this suspicion is
 " strengthened by the fact that *well-experienced*
 " *surgeons who saw these various symptoms and*
 " *examined them carefully thought that they could*
 " *be none other than syphilis.* Further, there is
 " the fact that two of the infants were thought
 " to have been much benefited by mercurial
 " treatment. . . . The cases look to me quite
 " as much like vaccinia as syphilis. Whatever
 " their real nature, it is, of course, impossible to
 " refuse to recognise them as the direct con-
 " sequences of vaccination. Any attempt to do
 " this would be, to my mind, a dishonesty."

The Editor of the "Vaccination Inquirer,"
 commenting on this in the issue of that journal
 for July, 1891, says:—"At the present time our
 " knowledge or ignorance of the nature and
 " affinities of cow-pox and syphilis is such that
 " the results of the latter are indistinguishable by
 " 'well-experienced surgeons' from the effects of
 " contamination with the former, and it is only
 " quite lately that Dr. Creighton's teaching on this
 " point, supported by Auzias Turenne's writings
 " and Crookshank's pathological doctrines, is begin-
 " ning to be grasped; we hold it to be uncandid
 " and fallacious to assert that syphilis is rarely
 " conveyed by vaccination while affirming it may

“of itself occasion symptoms hitherto regarded
“as unmistakably syphilitic. It is unfair to
“the public and bad pathology, as well as
“casuistical, to go about saying in the lay press
“that vaccination will not convey syphilis to
“your child from somebody else, while in pro-
“fessional journals you admit that the vac-
“cinated may get snuffles, thrush, buboes, nodes,
“phagedæna, and the rest of the catalogue of
“syphilitic abominables, from the pure and
“unadulterated ‘Jennerian vesicle.’”

The “Archives” continue:—“In reference to
“the possibility of conveying syphilis from a
“vaccinifer who did not reveal the taint by any
“visible symptoms or any degree of cachexia, I
“feel bound in honesty to say I have no doubt
“of it. No surgeon in his senses would ever
“vaccinate from a child which showed obvious
“symptoms. The fact is, however, that a certain
“number of syphilitic infants look perfectly
“healthy, whilst yet very efficiently contagious.
“There is no use and much danger in denying
“this important clinical fact.

“In my second series of cases the vaccinifer
“did not present a single visible symptom.

“It is absurd to assert that inherited syphilis
“is always to be detected, and it is a cruel
“injustice to imply that all accidents have been
“the result of carelessness.”

Then Mr. Hutchinson concludes:—“No reason-
“able doubt can be entertained that in each
“instance the infant’s illness and death was a
“direct result of the vaccination.”

The next number of the "Archives" (January, 1890) commences:—"The facts as to fatal vaccination with sloughing of the arm, which I published in the last number of the 'Archives,' have brought me several communications as to other cases bearing upon the subject."

Mr. Hutchinson cites several cases, including one in 1891, and thus concludes:—"The final supposition is that it is possible for vaccination, independently of any syphilis, whether implanted or hereditary, to evoke symptoms which have hitherto been regarded as peculiar to the latter malady, and which are apparently greatly benefited by specific treatment."

One of the most striking cases of the invaccination of syphilis of late years is that of Dr. Cory, the Director of the Animal Vaccine Station, and Instructor in Vaccination for the Local Government Board. He tested on himself the possibility of inoculating syphilis, and at the fourth attempt was successful. In the opinion of some, his death was accelerated if not caused by this syphilitic inoculation. The authorities emphasised this view by granting his widow a Civil List pension.

Finally, we have the weighty testimony of Dr. Charles Creighton, in his "Natural History of Cow-Pox and Vaccinal Syphilis" (London, 1887). At page 124, he says:—"The origin of vaccinal syphilis remains, as Bohn says, 'shrouded in mystery.' Readers who have followed my argument hitherto will not be surprised if now I claim the phenomena of so-called vaccinal 'syphilis' as in no respect of venereal origin,

“but as due to the inherent, although mostly
“dormant, *natural-history characters of cow-pox*
“*itself.*”

Dr. Creighton also observes at page 155 :—
“The real affinity of cow-pox is not to the small-
“pox, but to the great-pox. The vaccinal roseola
“is not only very like the syphilitic roseola, but
“it means the same sort of thing. The vaccinal
“ulcer of everyday practice is, to all intents and
“purposes, a chancre. It is apt to be an indurated
“sore when excavated under the scab ; when the
“scab does not adhere, it often shows an unmis-
“takable tendency to phagedæna. There are
“doubtless many cases of it where constitutional
“symptoms are either in abeyance or too slight
“to attract notice. But in other instances, to
“judge from the groups of cases to which inquiry
“has been mostly directed, the degeneration of the
“vesicle to an indurated or phagedænic sore (all
“in its day’s work) has been followed by roseola,
“or by scaly and even pemphigoid eruptions, by
“iritis, by raised patches, or sores on the tonsils
“and other parts of the mouth or throat, and by
“condylomata (mucous tubercles) elsewhere.”

CHAPTER XCIII.

VACCINATION AND LEPROSY.

THE comprehensive and eminently able work on the "Recrudescence of Leprosy and its Causation" (Swan, Sonnenschein & Co., London, 1893), by Mr. William Tebb, F.R.G.S. (whose indefatigable labours in all humanitarian causes are widely known and appreciated), has shown the danger to be apprehended from vaccination in a hitherto almost unsuspected and unexplored field. Its immense gravity and importance as a contribution to the general indictment of vaccination is of itself sufficient apology, if any is needed, for including here a series of extracts from Mr. Tebb's monumental work. Mr. Tebb's researches into this subject are world-wide, and have been conducted on the spot.

Amongst the introductory quotations given are the following :—"Leprosy is, perhaps, the most terrible disease that afflicts the human race. It is hideously disfiguring, destructive to the tissues and organs in an unusual degree, and is hopelessly incurable."—"British Medical Journal," 19th November, 1887.

"There is no known remedy for the disease (leprosy). Prevention can alone cope with it."—"Lancet," 27th April, 1889.

"The fact that the leprosy may be inoculated,

"I consider to be proved as much as any fact
"in medical science."—Dr. R. Hall Bakewell,
Physician to the Leper Asylum, Trinidad.

Mr. Tebb obtained evidence from the West Indies, British Guiana, Venezuela, California, the Sandwich Islands, Ceylon, Egypt, New Zealand, Cape Colony and Natal in South Africa, and most of the Colonies in Australia, and put himself in communication with superintendents of leper asylums and leading dermatologists in all other countries where leprosy is endemic.

He states that "the most distinguished names
"in the profession have testified to vaccination
"being the certain vehicle for the dissemination
"of leprosy. These names include Sir Erasmus
"Wilson (sometimes called the father of der-
"matologists) ; Dr. John D. Hillis ; Dr. Liveing ;
"Sir Ranald Martin ; Professor W. T. Gairdner ;
"Dr. Tilbury Fox ; Dr. Gavin Milroy ; Dr. R. Hall
"Bakewell, formerly Physician to the Leper
"Asylum, Trinidad ; Dr. A. S. Black, of Trinidad ;
"Dr. Edward Arning ; Dr. Walter M. Gibson,
"late President of the Honolulu Board of Health ;
"Professor H. G. Piffard, New York ; Dr. A. M.
"Brown, London ; Dr. Frances Hoggan ; Dr. Blanc,
"Professor of Dermatology, University of New
"Orleans ; Dr. Bechtinger, of Rio ; Professor
"Montgomery, of California ; Dr. Sidney Bourne
"Swift, late Medical Director, Leper Settlement,
"Molokai, Hawaii ; Dr. P. Hellat, St. Petersburg ;
"Professor Henri Leloir, Lille ; Dr. Mouritz ;
"Surgeon Brunt ; Dr. John Freeland, Government
"Medical Officer, Antigua ; Dr. S. P. Impey,
"Superintendent Leper Asylum, Robben Island,

"Cape Colony; and many others. On the subject of leprosy there are no higher authorities." (Pages 18 and 19.)

"Some idea of its nature may be gathered from the following description of leprosy, which may well excite the sympathy of the philanthropist. It will be found in a recent work on leprosy by Dr. Thin, pages 99-100. It is translated from Leloir, an eminent French authority on leprosy, and refers to the tubercular variety of the disease. 'If the patient,' he remarks, 'does not die of some internal disorder or special complication, the unhappy leper becomes a terrible object to look on. The deformed leonine face is covered with tubercles, ulcers, cicatrices, and crusts. His sunken, disfigured nose is reduced to a stump. His respiration is wheezing and difficult; a sanious, stinking fluid, which thickens into crusts, pours from his nostrils. The nasal mucous membrane is completely covered with ulcerations. A part of the cartilaginous and bony framework is carious. The mouth, throat, and larynx are mutilated, deformed, and covered with ulcerated tubercles. The patient breathes with the greatest difficulty. He is threatened with frequent fits of suffocation, which interrupt his sleep. He has lost his voice, his eyes are destroyed, and not only his sight but his sense of smell and taste have completely gone. Of the five senses, hearing alone is usually preserved. In consequence of the great alterations in the skin of the limbs, which are covered with ulcerated tubercles,

“ ‘crusts, and cicatrices, the pachydermic state of
“ ‘skin which gives the limbs the appearance of
“ ‘elephantiasis, and of the lesions of the peri-
“ ‘pheral nerves which are present at this time,
“ ‘and by which occasionally the symptoms of
“ ‘nerve leprosy are combined with those of tuber-
“ ‘cular leprosy, the sense of touch is abolished.
“ ‘The patient suffers excruciating pains in the
“ ‘limbs, and even in the face, whilst the ravages
“ ‘of the disease in his legs render walking diffi-
“ ‘cult and even impossible. From the hyper-
“ ‘trophied inguinal and cervical glands pus flows
“ ‘abundantly from fistulous openings. In cer-
“ ‘tain cases the abdomen is increased in size on
“ ‘account of the liver, spleen, and mesenteric
“ ‘glands being involved. With these visceral
“ ‘lesions the appetite is irregular or lost. There
“ ‘are pains in the stomach, diarrhœa, bronchial
“ ‘pulmonary lesions, intermittent febrile attacks.
“ ‘and a hectic state. The peculiar smell, recall-
“ ‘ing that of the dissecting room, mixed with the
“ ‘odour of goose’s feathers, or of a fresh corpse,
“ ‘is indicated, but badly described, by the authors
“ ‘of the Middle Ages, who compared it to that of
“ ‘a male goat.’ ” (Pages 10, 11, and 12.)

THE LEPROSY INVESTIGATION COMMITTEE.

By reason of the reports of the serious increase of leprosy in various countries, and the public interest excited by the self-sacrificing labours and death of Father Damien, an influential Committee was convened for the purpose of investigating the causes of this recrudescence, the first meeting being held on the 17th June, 1889, at Marlborough

House, under the presidency of the Prince of Wales.

Mr. Tebb gives numerous quotations from the Committee's reports, and also instances of the transmission of leprosy, from India, Cape Colony, Madeira, Russia, and Norway. Amongst these, Dr. Alexander Abercromby, of Cape Colony, writing from Capetown, 20th April, 1892, says that, "If a drop of blood gets mixed with the vaccine lymph in the operation of vaccination, then the disease (leprosy) may be transmitted in this way, but he is of opinion that, without the blood, there is no danger." (Page 214.)

Mr. Tebb observes:—"So far as the transference of syphilis and other deadly diseases is concerned, we know that this can be done with lymph of unimpeachable quality and without admixture of blood." (Page 214.)

Since this was written, medical testimony has proved unquestionably that all lymph contains the corpuscles of blood.

At a meeting of the Bombay Legislative Council (reported in the "Times of India," 24th February, 1892), held for the second reading of the Bombay Compulsory Vaccination Bill, the Honourable Mr. Javerilal U. Yajnick quoted from a letter of Dr. Bahadurjee, "an able and experienced medical gentleman," who wrote:—"Arm-to-arm vaccination affords a ready means for propagating such inherited constitutional taints as those of syphilis and leprosy. . . . Syphilis, as betrayed in obtrusive signs, is not difficult to recognise, but when concealed, as is more often

“the case, it is by no means easy to detect it. In the case of leprosy, it is still worse. There is no such thing as a leper child or infant. The leper heir does not put on its inherited exterior till youth is reached. And it is by no means possible by any close observation or examination of a child to say that it is free from the leprous taint.”

The “Lancet,” of 22nd October, 1910 (page 1231), gives particulars of a case, in which a boy, aged fourteen, was attacked by leprosy, in South Africa, as a result of the application to a wound of tobacco which had been chewed by a native, who, it afterwards transpired, was suffering from leprosy. The boy developed the disease, and died from it in about eleven years after the inoculation.

The “Madras Times,” 18th May, 1892, says:—
“Every effort is probably made to obtain pure and healthy lymph, but no guarantee can be provided against the presence of the germs of the disease in the lymph used for purposes of vaccination.” (Page 363.)

Mrs. M. A. Handley’s interesting book on “Roughing it in Southern India,” supplies a significant example of the risks attending the use of “lymph.” An outbreak of small-pox occurred in the Wynard district, and the Government issued orders for everyone to be vaccinated. The natives were forced into compounds ready for the operation. Mrs. Handley says:—

“We, too, had heard hideous stories of disease contracted through tainted lymph, but we were assured that all precautions had been taken, and

“ that the vaccine was of the purest, for the
“ children and calves from which it was produced
“ had been under medical observation. All that
“ we had to take on trust. In any case, there
“ was no escape, and the fateful moment had
“ arrived. F. offered himself first, as an encour-
“ agement to the shrinking creatures around ; in
“ another few minutes the doctor would have
“ begun and finished with him. My turn would
“ have come next, I suppose, then that of the
“ household servants, and so on, till the entire
“ compoundful of people had been rendered
“ immune from small-pox, at any rate, had not
“ a totally unexpected interruption now occurred.
“ First a sound of galloping hoofs approaching
“ broke upon the ears of the assembled people,
“ and in another moment a couple of horsemen
“ showed themselves tearing up the hill, franti-
“ cally waving papers in their right hands. As
“ they neared, they were seen to be white with
“ dust, and their faces livid and colourless, so
“ hard had they ridden in order to be in time to
“ *to stop the vaccination!* Their errand was
“ soon told. It had been discovered that the vac-
“ cine lymph about to be used had come from
“ the *most leprous village* in Southern India !
“ The message was delivered just in time—not an
“ instant to spare ; an accident to man or horse,
“ an extra drink of water on the road—the veriest
“ trifle—and some of us would have been surely
“ doomed to the most awful fate on earth.”

CHAPTER XCIV.

INOCULATION EXPERIMENTS—TUBERCULIN AND LEPROSY.

“ In an article on ‘ Koch’s Tuberculin in Leprosy,’
“ Dr. P. Ferrari gives the conclusions of several
“ observers who have experimented with the
“ tuberculin in leprosy. Dr. Danielssen (of
“ Norway) considers (1) that tuberculin in
“ leprosy gives general and local reactions, the
“ former generally coming on four to six hours
“ after the first injection, but sometimes in twelve
“ hours, and rarely in two or three days—the local
“ reaction is more tardy ; (2) that unfavourable
“ consequences ensue to the patient, the disease
“ being aggravated, and that the reactions have
“ some similarity to those produced by the pre-
“ parations of iodine in lepers ; (3) that the lymph
“ does not kill the bacilli, but seems instead to
“ give them nutriment and favours their repro-
“ duction and circulation in the blood ; (4) that
“ when immunity to the remedy is established,
“ the disease is in no way arrested, nor the bacilli
“ destroyed.”

“ Dr. Ferrari has himself come to the con-
“ clusion, from the consideration of the above
“ cases and of those of other observers, that tuber-
“ culin exhibits no direct useful action on the
“ leper. As in tuberculosis, it may act on the

“torpid condition of the tissue, not so much by any specific effect as on account of the small resistance of the diseased tissue. He remarks particularly on the outburst of new tubercles during the paroxysms of fever.”—“Journal of the Leprosy Investigation Committee,” No. 4, December, 1891, pages 46 and 47. (Pages 339 and 340.)

Dr. Julius Goldschmidt, Medical Superintendent, Lazzaretto Hospital, Madeira, who has made the pathology and treatment of leprosy a special subject of study, sent a communication to the Leprosy Investigation Committee (“Journal,” December, 1891), in which he refers to his inoculative experiments with tuberculin and other drugs, and says:—“As far back as eleven years, I tried to inoculate the anæsthetic form on the tubercular one, without success.” Mr. Tebb ventured “to point out to Dr. Goldschmidt how medical testimony showed that, while syphilis and leprosy were difficult to inoculate direct from the disease to those free from these diseases, the evidence that these and other diseases were readily inoculable by means of an intermediary host such as vaccine virus was now overwhelming.” (Pages 373 and 374.)

The “Lancet,” of 16th April, 1892, had a leading article on the results of the tuberculin treatment of leprosy. Referring to the experiments of Dr. Danielssen (of Norway), it says:—“Unfortunately the conclusion drawn was that tuberculin aggravated the disease considerably, and, by setting free the bacilli, started fresh foci of the disease, and made the whole process

"more active. As in lupus and phthisis, the patients became tolerant of the tuberculin after a time ; but the disease progressed all the same, and fresh symptoms were frequently excited ; many also of the old lesions became red and sensitive. In the anæsthetic form the patches enlarged, became redder and more sensitive, and new patches appeared."

Other instances are given, and in one the "Lancet" says :—"Scores of new tubercles came out all over the body. . . . The above cases do not exhaust the list of experiments, but they are sufficient to show that tuberculin is very uncertain in its immediate effects on leprosy." (Pages 344 and 345.)

Mr. Tebb visited a Leper Hospital, and saw the fashionable inoculative experimental treatment. He says :—"The poor creatures were brought into the surgery one after another ; some brave, and others with a timid, appealing look in their eyes. To enable them to bear the pain of the hypodermic syringe, thrust by the operating physician deep into the flesh, they had a handkerchief between the teeth, while held by the hospital nurse or attendant. The puncture of the instrument is usually the least painful part of the experimental process. The treatment, which is often continued for months, produces sickness, acute headaches, and fever. The rage for experimental research has long since passed the bounds of decent humanity." (Page 346.)

In Mr. Tebb's summary of conclusions, the following may be noted here :—

“That leprosy has greatly increased during the last half-century, and that it is prevalent in many places where it was formerly unknown.”

“That on one point there is much agreement and hardly any dissent—namely, the inoculability of leprosy—and that the view of leprosy as an inoculable disease, while it is most clear to those who take the malady to be due to a bacillus, is older than the bacteriological evidence, and is not dependent thereon.”

“That the increase of leprosy in the Sandwich Islands, the West Indies, the United States of Columbia, British Guiana, South Africa, and New Caledonia has followed *pari passu* with the introduction and extension of vaccination, which in nearly all these places, without previous inquiry or demand from the inhabitants, has been made compulsory.”

“That as leprosy is a disease of slow incubation, often taking years to declare itself, and in its incipient stages can be detected only by practitioners of large experience, it follows that, in countries where leprosy exists, there is great danger of extending the disease by arm-to-arm vaccination.”

“That leprosy being one of the most loathsome diseases to which the human race is subject, and being practically incurable, it behoves all interested in the public well-being to do their best to prevent its diffusion, and, as a means thereto, to discourage the practice of vaccination on that ground, if on no other.” (Pages 350-352.)

Truly the perusal of Mr. Tebb's great work on "Leprosy and Vaccination" recalls the well-known saying of Burns, "Man's inhumanity to man makes countless thousands mourn." Those who wish to know more about this aspect of the case against vaccination, would do well to obtain a copy of the book referred to, and thus draw direct from the fountain head.

CHAPTER XCV.

VACCINATION AND TUBERCULOSIS.

GREAT efforts are now being made to cope with one of the most fatal maladies to which the human race is subject. The British Congress on Tuberculosis, held in London, in July, 1901, will long be memorable in the annals of public health. The fact that His Majesty King Edward VII. evinced a great personal interest in the proceedings, and that eminent experts from all over the world assembled with a view of concentrating their united wisdom and research upon this supremely important subject—Professor Koch also being present—all combined to make this Conference distinguished above all others.

It was further memorable for the startling announcement by Professor Koch that, after a considerable investigation, aided by experiments, he “felt justified in maintaining that human tuberculosis differs from bovine, and cannot be transmitted to cattle.” He proceeded:—“It seems to me very desirable, however, that these experiments should be repeated elsewhere, in order that all doubt as to the correctness of my assertion may be removed.” He stated that the German Government had appointed a Commission to make further inquiries on the subject.

Dr. Koch next proceeded to discuss human

susceptibility to bovine tuberculosis. He observed that "this question is far more important to us than that of the susceptibility of cattle to human tuberculosis, highly important as that is too." He went on to say, "It is impossible to give this question a direct answer, because, of course, the experimental investigation of it with human beings is out of the question."

This is rather an amazing statement, coming from the inventor of "Tuberculin," with the aid of which innumerable experiments have been made, and are even now being continued, upon human beings, with fearfully fatal results. Soon after this speech was delivered, "Tuberculin" fell under a cloud, on account of its manifold failures. But it has since, like vaccine lymph, been improved, (!) and its use revived, even—and I record this with some degree of shame and humiliation—in Leicester.

Professor Koch also said, "If the bacilli of bovine tuberculosis were able to infect human beings, many cases of tuberculosis caused by the consumption of tubercle-bacilli could not but occur among the inhabitants of great cities, especially the children. And most medical men believe that this is actually the case."

We need not discuss these questions here, as it has been established by the Royal Commission on Tuberculosis that bovine tuberculosis can be transmitted to man. It seems strange that Professor Koch, above all others, should ever doubt it.

It is a singular and sad commentary on human

infatuation, as well as upon the supposed advancement of medical science, that we should continue to sow broadcast the seeds of consumption by inoculation, and then, after the crop has matured, to affect surprise and grief. Not long ago it would have been regarded as a cruel crime to suggest that consumptive patients should have outdoor treatment. Now it is all the fashion, and is undoubtedly beneficial. If the Government had abolished vaccination, instead of offering to provide sanatoria for the treatment of consumption, they would have taken the first strong step towards ridding the human race of the devastating scourge of this malady.

The "Medical Times and Gazette," for 1st January, 1854, stated that consumption "has widely spread since the introduction of vaccination, and within ten years (ending 1853), had slain its 68,204 victims in the metropolis alone."

Dr. Bray, in a public speech at Market Rasen, in 1876, stated: "Facts have accumulated to show that since vaccination had become the law of the land, consumption, which before was comparatively unknown in this country, had, as it were, become an inheritance in certain families. The pure lymph, perhaps obtained from the greasy heels of a dismal old horse, was identical with the matter ejected from the lungs of a consumptive person. . . . Vaccination was applied to the arm, but the poison diffused itself rapidly into the lungs, the blood, the stomach, and even the brain."

In the "British Medical Journal," 13th Decem-

bér, 1879, Dr. Simon says, "That vaccine lymph may possibly contain the contagion in full vigour, even when the patient has not on his own person any outward activity, and that infection may follow both from tuberculosis and syphilis."

The "Medical Times and Gazette," of 3rd September, 1881, records that "M. Toussaint vaccinated a cow in an advanced stage of tuberculosis with lymph absolutely pure. The vesicles progressed normally, and with the lymph obtained from them he vaccinated different animals, all of whom subsequently became tuberculous. The significance of these experiments can scarcely be overrated."

Dr. (now Sir) W. J. Collins, M.D., writing from St. Bartholomew's Hospital, 10th September, 1881, with reference to the communicability of syphilis, erysipelas, pyæmia, and scrofula, says:—"That tubercle or scrofula can be engendered or intensified by vaccination is no new theory. Dr. Squirrell, an anti-vaccinator, suggested it seventy years ago, and now that a belief in the inoculability of tubercle is gaining ground, it will probably not be long before this danger is considered as real as that of vaccino-syphilis."

Recently numerous undeniable proofs have been adduced. In 1906, the "Petit Parisien" published an interview with Professor Vallee on the subject of Dr. Behring's bovo vaccine. The Professor said that he had at first believed in the efficacy of this remedy, but experiments had proved to him that it was no remedy at present for tuberculosis. Thus two calves which had

been vaccinated and placed among tuberculous cows contracted tuberculosis, whereas they ought to have remained healthy. . . .

Questioned as to whether bovo vaccine, a tuberculous product, was really harmless, Professor Vallee replied that he tried it on guinea pigs, which became tuberculous. Professor Lignieres, of Buenos Ayres, obtained the same result. Professor Vallee said:—"If I had inoculated cows with it, not only should I not have vaccinated them, but I should certainly have given them tuberculosis."—Reuter.

The "Keighley Herald," of 8th July, 1910, contained a long article by "Retired Medico," entitled "Consumption's Cause." The writer expounds the view that the modern prevalence of consumption is an aftermath of arm-to-arm vaccination. He also comments on the similar risk attaching to vaccination with calf lymph, and thus concludes:—"This subject is a grave one for the people, for it entails the vital question of whether we are not doing our best still, through vaccination—I leave the question of the merits and demerits of vaccination to others—to propagate the growth of the greatest twentieth century scourge—consumption."

A paper on "The Great White Plague," read at the fifth annual meeting of the Connecticut Medical Union, in Waterbury, Conn., U.S.A., on 1st June, 1910, by Mr. L. W. Andersen, was printed in the "Sunday Herald," of 12th June, 1910, and the writer expressed the belief "that tuberculosis will continue to exist and increase

"as long as the virus of animals, more or less impregnated with tuberculosis, is injected into the human blood."

Writing on the subject of vaccination and tuberculosis, Dr. Perron, Officier de la Legion d'Honneur, published an article of superlative importance in the "Gazette Hebdomadaire des Sciences Médicales," which was translated and published in the "Vaccination Inquirer," of December, 1890, and January, 1891, and from which the following extracts are taken:—

"The possibility of conveying tuberculosis to man in the act of vaccination was long ago pointed out. Tuberculosis has, in fact, a special predilection for the bovine race which yields us our vaccine. There are few of these animals that escape its attacks; the calf, the heifer, sometimes bear traces of it but a few weeks after their birth."

"The cow, as we have said, is the tuberculous animal *par excellence*."

"If, as announced by Professor Bouchard, the medium created by a vaccination can be destructive to one or several microbic species, we may add that by the law of reciprocity a medium of cultivation may at the same time be favourable to one or several microbes. That is exactly what happens with the cow in respect of tuberculosis and vaccinia, diseases between which the soil of cultivation establishes, as we see, a striking connection."

"At the very time when we have created in the man the vaccinal soil, we run the risk of

“having, *ipso facto*, established that humoral
“state (*terrain humoral*) which is favourable to
“the tuberculous genesis.”

“If we now turn back and examine the events
“of the last century or so, we can show a con-
“stant increase of tuberculosis, a fact never
“hitherto satisfactorily explained. There was a
“time when this malady existed only as an excep-
“tional thing; now, actually, in spite of the
“incessant progress in public and private hygiene,
“in spite of all the material improvements that
“have been made, it tends more and more to rise
“to the rank of a pestilence. It should be
“remarked that it strikes by preference at the
“young lives—that is, those who are, nevertheless,
“at the age when the physical resistance to
“morbific causes is the strongest. Now, a malady
“which originates in exhaustion, in vital poverty,
“should display its power in the inverse order,
“and should fall most heavily on the old.”

“Side by side with this growing extension of
“tuberculosis, we see developing, *pari passu*, and
“in the same period of time—that is to say, since
“the beginning of the century—the practice of
“vaccination. We may ask ourselves whether in
“this double simultaneous evolution there is not
“a hidden oneness. If tuberculosis, in spite of
“all sanitary precautions, has multiplied its
“attacks during the last hundred years, it is, we
“submit, because vaccination has come to create
“for it a propitious soil. That would explain
“not only its advancing growth in all civilised
“countries, but also its special influence over the
“young subjects, who are always more or less

"recently vaccinated, and consequently more receptive than the others in the presence of the bacillus."

"In all the European armies vaccination is the order of the day. On their arrival with their corps, the young soldiers are forthwith carefully revaccinated. Now, the military statistics of all countries show an enormous proportion of various forms of tuberculosis among soldiers, especially during the first and second year after their enlistment."

"Whence, then, can come these attacks of tuberculosis, so sudden, so numerous, upon subjects that, but a few months before, the council of revision rightly declared to be fit for service? Tuberculosis of the lungs, of the organs, of the joints, of the bones, etc., all these fatal evils show themselves in the garrisons of all countries with a frequency before which one might well despair. We believe that we must simply seek the reason for these facts in the revaccination which awaits the recruits upon their arrival at their corps, and which transforms them forthwith into a medium which is receptive towards these germs of tubercle which swarm in centres of population. This revaccination immediately upon enlistment is all the more regrettable and inopportune since just at that moment the young man, separated from his family, his country, his familiar conditions of life, undergoes, without any period of transition, total and radical changes in his manner of life, and thereby finds himself less well equipped for resistance."

"We must recall the fact that tuberculosis is

“ ‘hatched’ amongst bovines with very great
“ facility. . . . Also to the progressive extension
“ of tuberculosis since the end of the last century,
“ and the concomitant extension of the vaccinal
“ practice; and the inexplicable frequency of the
“ malady amongst young or revaccinated subjects.”

Here, then, we have the “rationale” on the growth of consumption, communicated by an eminent pro-vaccinist, who is certainly not at all favourable to the anti-vaccinist view of the question. Dr. Perron writes with the idea of inculcating the exercise of more care in vaccinating, rather than—as one would have thought such risks ought to suggest to these experimenters with human bodies—to the entire abandonment of so dangerous and disease-distributing a practice.

The extraordinary growth of consumption in Japan, where, with increasing vaccination and revaccination, the death-rate from pulmonary tuberculosis has increased more than 50 per cent. from 1886 to 1909; whilst on the other hand, with declining vaccination, the death-rate from the same cause has gone down in inverse ratio both in England and Switzerland, is a striking confirmation of the argument of Dr. Perron. (See Registrar-General's Seventy-Third Annual Report, 1910, Table LXXIX., also the International Tables, pages 112-141.)

CHAPTER XCVI.

DISEASES INJECTED, INTENSIFIED, AND INCREASED BY VACCINATION AND INOCULATION.

ALTHOUGH the preceding pages deal principally with Vaccination and Leicester, I do not regard them as complete without some reference to the long and growing list of inoculable diseases connected with the practice of vaccination. From the very first, far-seeing medical men were able to detect the tendency and effects of the "new" inoculation. A flood of light was thrown on this gruesome subject by Dr. Makuna's "Vaccination Inquiry," published in 1883. Although it was promised on the cover of the first edition that the second edition would "shortly be published," nearly thirty years have elapsed, but it has not yet seen the light. Like another "Balaam," the inquiry was called to curse the anti-vaccinators, but it eventuated in cursing its promoters. The first batch of evidence proved far too damning to the cause of vaccination for a second instalment to be issued.

Of the 384 replies published, nearly all were from out-and-out believers in vaccination. Yet they recorded 53 cases of syphilis, 126 of erysipelas, 64 of eczema, 22 of erythema, 9 of scrofula, and a number of others, making over 40 diseases in all. What the number would have

increased to had the second edition been published, we are left to surmise. Besides this long catalogue, other medical men have experienced similar disasters in their practice. While not proposing to give a complete list, I append the principal of those diseases which have already been published or come to my knowledge :—

Abdominal	Diseased Joints.	Phagedenic action.
Phthisis.	Dyscrasia.	Phlegmon.
Abscesses.	Ecthymia.	Pityriasis.
Adenitis.	Eczema.	Plague.
Anæmia.	Eruptions.	Pneumonia.
Angeioleucitis.	Erysipelas.	Prurigo.
Apnæa.	Erythema.	Psoriasis.
Arm disease	Foot-and-Mouth	Pyæmia.
(involving	Disease.	Pyrexia.
amputation).	Gangrenosa.	Rickets.
Axillary Bubo.	General Debility.	Scald Head.
Axillary Gland,	Herpes.	Scarlatina.
enlargement of.	Impetigo.	Scrofula.
Blindness.	Inflammation.	Septicæmia.
Blood Poisoning	Latent diseases	Skin Disease.
(fatal).	developed.	Struma
Boils.	Leprosy.	intensified.
Bronchitis.	Lichen.	Syphilis.
Bullæ.	Lupus.	Tetanus.
Cancer.	Marasmus.	Tuberculosis.
Cellulitis.	Meningitis.	Ulceration.
Convulsions.	Mesenteric	Urticaria.
Cowpox.	Disease.	Vaccinia.
Diarrhœa.	Œdema.	Varioloid.
Diseased Bones.	Paralysis.	

In 1882, a list of 155 testimonies of medical men and medical journals was published by the London Society for the Abolition of Compulsory Vaccination. They record 710 deaths from vaccination, one of which was from an early case of

revaccination with calf lymph. Thirty-nine deal with animal lymph, principally from the cow or calf. Of 504 vaccinated cases cited by Dr. William Rowley, M.R.C.P., in England, as early as 1805, nearly all took small-pox, and 75 died. Also, nearly 500 other cases caught small-pox after vaccination, 31 injuries are specifically named, and over 650 additional cases are mentioned, including cancer, erysipelas, leprosy, scrofula, syphilis, tuberculosis, and other diseases. Professor Bartlett, when lecturing at the University, New York, in 1850, quoted, on the authority of two eminent French physicians—Dr. Barthez and Dr. Rilliez—208 vaccinated children, 130 of whom died of tubercular consumption, and the remaining 70 of other inoculable maladies.

Mr. William Tebb presented a list to the Royal Commission of 6,233 cases of injury, and 842 deaths. Mr. Geo. S. Gibbs published, in 1891, the results of a vaccination census at Darlington, which recorded 224 cases of injury, and 79 deaths. The author presented to the Royal Commission a table of 186 injuries, and 109 deaths, in the Leicester district alone. Then we have that long catalogue of about 1,000 vaccino-syphilis cases on page 617 of the Sixth Report of the Royal Commission.

This appalling list could be considerably augmented now, as numerous other cases have come to light since the time of the Royal Commission.

Then there is that terrible total of medically-certified deaths published by the Registrar-General,

in his annual reports, which reached no fewer than 1,530 to the end of 1910, and of these, it should be remembered that 251 have occurred since the introduction of glycerinated calf lymph.

We must also take into consideration those striking returns to the House of Commons (see Appendix, Tables 54-56) showing that, after the introduction of compulsory vaccination, the deaths from inoculable diseases increased from 63,558 per million in 1853 to 82,189 per million of the population in 1870. It is true this number has gone down since, but so has vaccination! However, I deal with that subject in the chapter on inoculable diseases. One important point should be borne in mind—that the general death-rate from all causes and at all ages was appreciably declining at the very time that the deaths from all these inoculable diseases were rapidly increasing. In the favourite language of pro-vaccinists, I may ask—To what other cause can this be attributed than vaccination?

CHAPTER XCVII.

INOCULABLE DISEASES—ENGLAND AND WALES.

IN 1880, the late Mr. Chas. H. Hopwood, Q.C., M.P., moved in the House of Commons for a return showing the percentage of deaths from small-pox, at certain ages, to the total deaths from that disease; and also for the number of deaths of infants under one year of age per million births from a number of specified inoculable diseases and all other causes. This was granted, and gave the information for England and Wales, from 1847 to 1878 inclusive. The specified diseases were:—Syphilis, scrofula, tuberculous peritonitis, skin diseases, erysipelas, pyæmia, bronchitis, diarrhœa, and atrophy.

These returns show an increase in the death-rate from syphilis from 472 per million births in 1847 to 1,851 per million births in 1878. The combined death-rate from the nine enumerated causes, including syphilis, increased from 55,213 per million births in 1847 to 81,280 per million births in 1878.

In 1888, Mr. Francis Channing (now Lord Channing) moved for a similar return for the years 1879 to 1886 inclusive, which also was granted and published.

This second return shows that the death-rate

from syphilis more than maintained its high level, and in the last year (1886) was 1,882 per million births. The combined death-rate from the nine enumerated causes likewise remained at a high level, and increased from 71,013 per million births in 1879 to 84,177 per million births in 1886.

Many things have happened to affect the mortality during the thirty years which have elapsed since the second return appeared, and, in the course of that long period, there has been a marked decrease of vaccination, which set in soon after the great small-pox epidemic of 1871-73, and the passing of the great and beneficent Public Health Act of 1875. In addition to this, the sittings of the Royal Commission covered seven years, during which time prosecutions were largely suspended. Then came the successive Acts of Parliament, in 1898 and 1907, both not only moderating the severity of the compulsory law, but also bringing in the "Conscience Clause," with its army of exemptions, and consequent reduction in the number of defaulters who would otherwise have been liable to be proceeded against. Then, the extension of the age for vaccination from three to six months must have produced some tangible result in reducing the infantile death-rate from all causes.

The consideration of all these circumstances made me feel anxious to know what the actual effect has been, so that I might publish it in this work. I, therefore, asked Mr. J. Ramsay Macdonald, M.P. for Leicester, if he would undertake to move in the House of Commons for the further return, from 1887 to 1910. To

this Mr. Macdonald kindly and promptly assented. He moved for the return on 6th March, 1912 ; it was ordered to be printed, and on 22nd March was ready to be issued to the public.

As I fully expected, and the facts warranted, we find a substantial reduction, both for syphilis and for the total of the nine enumerated inoculable diseases. There is a considerable decrease in the death-rate from each of these diseases, with the exception of pyæmia and phlegmon, which are taken together, and show a slight increase—from 153 per million births in 1887 to 212 per million births in 1910. Syphilis has gone down from 1,787 per million births in 1887 to 1,150 per million births in 1910, whilst the combined death-rate of the nine inoculable diseases has declined from 80,411 per million births in 1887 to 53,014 per million births in 1910. (For the full Parliamentary returns, see Tables 54, 55, and 56, Appendix.)

I now give a summary, showing the average annual death-rate from syphilis, and from the combined group of the nine inoculable diseases, with the average annual percentage of vaccinations to births, for the different periods, as specified :—

DIAGRAM D.

ILLUSTRATING TABLE 35.

INOCULABLE DISEASES. ENGLAND AND WALES. 1847-1910.

The Small Dark Pyramids show the actual death-rate from syphilis per million births.

The Large Pyramids show the death-rate from nine inoculable diseases, including syphilis, per million births.

(One-tenth only shown to accommodate size of diagram.)

The Black Dotted Curve shows the death-rate from all other causes per million births.

(One-tenth only shown to accommodate size of diagram.)

The Red Curve shows the percentage of vaccinations to births.

(Proportionally increased to accommodate size of diagram.)

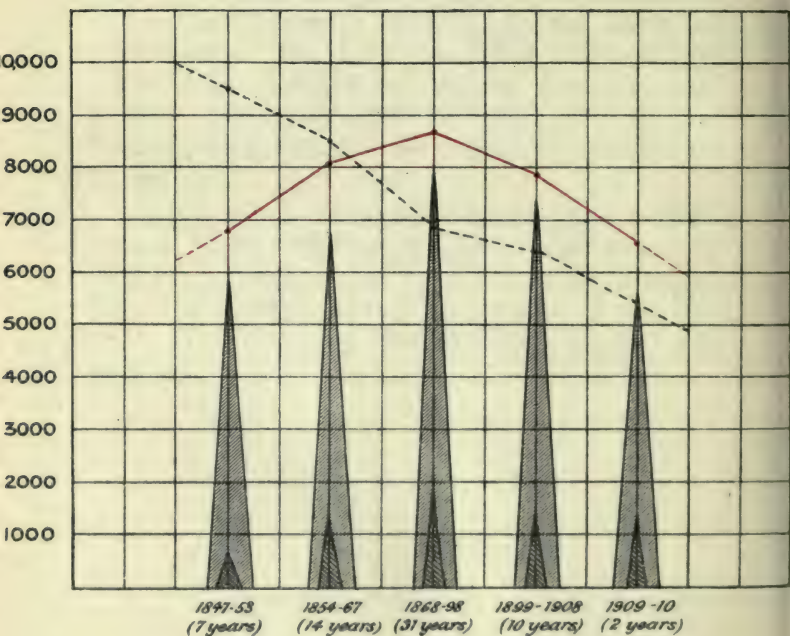


TABLE 35. (See Diagram D.)

INOCULABLE DISEASES.

Table showing, for ENGLAND AND WALES, the death-rate per million births from Syphilis; from the total of nine inoculable diseases (including Syphilis); from all other causes; the percentage of vaccinations to births; and the conditions as to vaccination prevailing during the several groups of years. (See Parliamentary Returns, Tables 54, 55, and 56, Appendix.)

Period.	Average Annual Death-Rate per Million Births.			Percentage of Vaccinations to Births.	Prevailing Conditions.
	Syphilis.	Nine Inoculable Diseases, including Syphilis.	All Other Causes.		
1847 53 (7 years)	564	58,997	97,469	62·3	Vaccination Optional.
1854 67 (14 years)	1,207	67,912	84,734	73 4	Vaccination Obligatory
1868 98 (31 years)	1,705	79,336	68,783	78 3	Vaccination Compulsory, and enforced by penalties.
1899 1908 (10 years)	1,269	73,563	64,082	71·5	Vaccination Acts relaxed, and "Conscience Clause" started.
1909 10 (2 years)	1,185	54,124	52,961	59·6	Vaccination Acts amended; exemptions at work

It will be seen that as the practice of vaccination lessens, the mortality from all these diseases also decreases. That from syphilis is falling rapidly, and in 1909-10 is less than any other of the periods, excepting the first, whilst the death-rate from the nine inoculable diseases combined (including syphilis), after rising by an

increase of nearly 26 per cent. to a maximum of close upon 80,000 per million in the period of highest vaccination, is now plunging downward with decreased vaccination, and has reached the lowest recorded mortality since registration began in 1847.

The fall is a very remarkable one, being nearly 32 per cent.—from 79,336 per million to only 54,124 per million.

No unbiassed mind can examine these figures and resist the conclusion that the synchrony between enforced vaccination and the increased death-rate, and also that between the decline and less rigorous enforcement of vaccination and the lessened death-rate, is much more than a coincidence—is, indeed, direct cause and effect.

PART XII.

LYMPH AND VACCINATION.

CHAPTER XCVIII.

"LYMPH."

WHAT IS "VACCINE LYMPH"?

So very little is generally known of the actual constituent elements of "Lymph," or what is euphemistically called "Vaccine Lymph," used for vaccination, that I feel it to be not only of adequate importance to embody some reference in this work, but a duty to give it the fullest consideration. Moreover, it is so entirely inseparable a factor in the subject under review, that, without it, the book would be incomplete.

According to Chambers's Dictionary, "lymph" is "a colourless, nutritive fluid, in animal bodies." The Standard Twentieth Century Dictionary defines "lymph" as "a transparent, colourless, alkaline fluid, consisting of a plasma, resembling that of the blood, and of corpuscles, like the white blood corpuscles."

None of the whimsical varieties of virus, which have been misleadingly called "lymph," and have done duty for vaccination, agree in any sense with the foregoing definitions. It is a physiological perversion that natural "lymph" should be degraded by association with the vile viruses known as "vaccines." None of these can be considered "nutritive" in the true meaning of that term.

"Vaccine lymph," so called, is a mutilation of terms, a delusion, and a snare. In the minds of many people, it came to be regarded as a Heaven-bestowed blessing, a natural product prepared by a beneficent Providence, to countervail the malific influence of small-pox.

Of all the professional witnesses called before the Royal Commission to enlighten the world, not one was able to satisfactorily define what is meant by vaccination, or what variety of virus claimed specifically and exclusively to fulfil the requirements of that term. Very few, outside those who have studied this subject, are aware of the occult vagaries which have signalised the manufacture and production of vaccines, or the wide diversity of choice which has been offered to, or forced upon, a credulous public.

Those who have thought that there has been "no change" since Jenner's day will be surprised to have their darkness enlightened by the appended list :—

(1) The Jennerian equine virus (or repulsive matter exuding from the greasy heels of a consumptive horse).

(2) Swine-pox virus, with which Jenner inoculated his eldest son.

(3) Horse-pox cow-pox virus, or horse-grease virus passed through the cow.

(4) Spontaneous cow-pox virus—the Gloucestershire brand.

(5) Geely and Badcock's "lymph"—the virus of small-pox passed through the cow.

(6) The Beaugency virus, a foreign corruption of unknown elements.

(7) The Passy virus, similar to No. 6.

(8) Dr. Worlomot's "calf lymph," or virus, in points, tubes, or pots of pomade, as supplied to the Royal Family of England.

(9) Lanoline vaccine, or vesicle pulp virus, invented by Surgeon-Major W. G. King, and used extensively in India and Burmah.

(10) Donkey virus, the discovery of Surgeon O'Hara, and strongly recommended to municipalities in India.

(11) Buffalo virus, also recommended in India, as "yielding more vesicle pulp than calves," but chiefly conspicuous for its "abominable odour."

(12) Monkey virus.

(13) Small-pox corpse virus, obtained from small-pox victims after death.

(14) Thymol solution, glycerine, and vaccine virus, a dangerous concoction, by which 320 persons at Rügen (Germany) were infected with a loathsome, contagious disease.

(15) Glycerinated calf virus, recommended by

the Royal Commission on Vaccination, obtained from small-pox and other sources, and now in use.

(16) More recently the Government "lymph experts" have been experimenting with "chloroformed lymph," and the Forty-First Annual Report of the Medical Officer of the Local Government Board contains a report by Dr. Blaxall on the use of oil of cloves in the preparation of "glycerinated calf lymph."

These are but a few of the many lymphs or viruses which have passed through innumerable more or less diseased bodies, and which have now been proved by high authorities to be capable of spreading leprosy, syphilis, and other revolting and incurable maladies.

Each of these vile compounds has, in its day, been the "true and genuine" "life-preserving fluid." As they have passed into oblivion, others have taken their place.

HUMANISED "LYMPH."

The dangers of arm-to-arm vaccination, as a disease-diffusing agency, have been patent to many members of the medical profession all along. Notwithstanding the assurances given by the official "gang" as to the harmlessness of the operation, human vaccinifers continued to transmit syphilis, scrofula, erysipelas, leprosy, and a whole host of other diseases (referred to elsewhere), and these diseases occurred with such tragic frequency, that the Royal Commission Inquiry could no longer be withheld.

Even in 1881 the "British Medical Journal," of 24th September, contained the following:—

"The President (Mr. Ernest Hart, M.R.C.S.) remarked that the medical profession had reasons for coming to the conclusion that, during the last thirteen years, their impressions as to the value of humanised lymph had undergone considerable change." This carries us back to 1868, antecedent to the great epidemic of 1871-73.

After the Final Report of the Royal Commission, recommending that "calf lymph" be used for vaccination, the old arm-to-arm system, so prolific of danger, which had for so long been upheld, against light and reason, as "perfect" by pro-vaccinists, and denounced all the time by anti-vaccinators, received universal condemnation. Public Vaccinators are now forbidden to use arm-to-arm vaccine. They are not compelled to use the "Government brand" of "calf lymph," but may use any "glycerinated calf lymph," providing a record is kept of its source. The old arm-to-arm vaccination is still continued by some private and other practitioners in many places. Arm-to-arm vaccination was nothing less than the universal distribution of all the diseases of humanity broadcast over the nation.

As an example of what has been done to obtain "pure lymph," the following will take some beating. Dr. Bray, speaking at Market Rasen, and reported in the "Anti-Compulsory Vaccination League Circular," 1876, stated that:—"A child, 'whom nobody owned,' was killed in the streets of Paris, and given over to the medical men

"for anatomical purposes. In the breathing tubes, thorax, and stomach were found upwards of 15,000 ulcerations. The matter was scooped out, and a living child vaccinated with it. It produced all the symptoms of the 'true lymph.' Like produced like. The matter of diseased lungs would produce in another subject lung disease."

When Mr. Farn, the Local Government Board Examiner of Vaccine Lymph, was before the Commission, his answers were most illuminating with reference to the purity of "Government lymph." He informed the Commission that "'so extensive and peculiar' was his knowledge of vaccine that when he takes his holiday there is no one else in London capable of performing the same delicate task, and accordingly the tubes requiring examination have to follow him (4,014). From this we should conclude that his qualifications are above reproach. But we find that he is not a medical man (4,130)—that he has not included microbes in his life-long studies (4,133), during which he has been engaged entirely in distinguishing small differences (4,131)—that he has no knowledge of vaccination or its literature (4,052 and 4,069), or whether its contagion has been discovered. His search is directed mainly to the detection of blood corpuscles (4,060)—but not because he is aware of any evidence that blood is more likely to convey disease than other contents of the body (4,183). It is also beyond his knowledge that 'lymph' comes from the blood (4,185). He will not say it is possible to distinguish between

" 'lymph' which is syphilitic and that which is
 " not (4,164), nor between that which is inflam-
 " matory and that which is not (4,167). With such
 " microscopic power as he is able to employ he
 " would not be able to recognise any of the
 " bacteria we hear so much of (4,154), and if he
 " could he would not know what they were!
 " (4,155). He is not aware of any diseases whose
 " causes he identified or excluded by the kind of
 " examination which he makes! (4,159). When
 " asked by Dr. Collins: 'Are we to understand
 " that as a matter of fact you have ever guaranteed
 " lymph as pure?' he replies, 'No'! (4,200)."

It will thus be seen that at no time has lymph been either "pure" or guaranteed. The public have been gulled by official assurances, now known to be worthless, but no more worthless than anti-vaccinators have all along been aware of. The Government microscopic examinations of lymph were conducted, since 1881, by this accomplished gentleman who knew nothing of "microbes," and whose object was to detect blood corpuscles, and to reject as impure all lymph found to contain "blood," or if "coagulated" or "opaque."

When giving his evidence before the Royal Commission on Vaccination, Professor E. M. Crookshank, M.D. (London), M.R.C.S., Professor of Pathology and Bacteriology in King's College, London, testified that:—"We have no known
 " test by which we could possibly distinguish
 " between a lymph which was harmless and one
 " which might be harmful to the extent of com-
 " municating syphilis." (Question No. 11,119.)

Now that calf "lymph," admittedly as dangerous or more so than human "lymph," is employed in all public vaccinations, strange to say all precautions are thrown to the winds. Although calf lymph "coagulates" much more than human lymph, it is used indiscriminately, whether "coagulated," "opaque," or containing blood. The "trituration" process does not, and cannot possibly, eliminate the micro-organisms of a pathogenic nature. It rather more equably, but indefinitely, distributes them throughout the whole of the "pultaceous" mass. There is, therefore, not only no guarantee of any kind as to the purity of "lymph," but, even if there were, it would be entirely valueless.

ANIMAL "LYMPH."

In the 1886 edition of Quain's "Dictionary of Medicine," we are assured that "by the adoption of bovine matter we merely substitute one possible risk for another," and that is as true to-day as when it was written.

Dr. Seaton says ("Handbook of Vaccination," page 337) :—"There is no one in England whose opinion on the subject of animal vaccination will be received with so much respect as Mr. Ceely's, because there is no one who has nearly the knowledge that he possesses of the disease in the cow, and its transmission to the human species. . . . So far from being likely to produce fewer ailments, and cutaneous eruptions in the pre-disposed, he knows from his experience that it would, as being more irritating,

"produce more." (The Mr. Ceely alluded to was Mr. R. Ceely, M.R.C.S., L.S.A., of Aylesbury.)

Mr. J. H. Boyle, M.B., C.M., L.M., in the "Lancet," 3rd April, 1880, records a case of erysipelas, followed by large ulcerated, unhealthy sores in a previously healthy child, at six months, following vaccination with calf "lymph."

Writing after forty years' practice as a physician, Dr. William Hycheman, M.D., New York, said in 1880:—"Now vaccination by calf-pox, cow-pox, or humanised pox, whatever may be the multiplicity of lymphs (and 'pure vaccine' is only a rhetorical euphemism for 'horse-grease'), is an eruptive disease, setting in with febrile symptoms, followed by papule, vesicle, and pustule, in about eight days. And what else is small-pox? I have recently dissected more than a dozen children, whose deaths were caused by vaccination, and no small-pox, however black, could have left more hideous traces of its malignant sores, foul sloughing, hearts empty or congested with clots, than did some of these examples of State physic, which killed with rotten patches of lungs, spleen, mesenteric glands, kidneys, and intestines."

In the "Medical Times and Gazette," of 3rd September, 1881, M. Toussaint says that "the chances of cows in whom spontaneous vaccinia may appear, . . . being, like so many of their species, tuberculous, would be great; and . . . that the dangers of animal vaccination may be greater than those of human, which are supposed to be avoided by having recourse to the cow."

Dr. Husband, whose authoritative evidence may be regarded as having finally and indisputably established the possibility of the transmission of syphilis by vaccination, says on this subject:—"It should be borne in mind that "it cannot be shown that there is no risk of "transmitting diseases from the calf to the infant. "The very fact that vaccinia itself is so readily "communicated is a presumption that danger of "this kind does exist—not probably greater than "that of communicating disease from infant to "infant, but, for anything we know, not less." This startling statement appeared in the thirty-fifth annual report of the Scottish Board of Health.

The Dissident Commissioners also refer to calf "lymph," and, in their paragraph 178, allude to the condemnatory character of paragraphs 399, 409, 410, 413, 417, 418, 419, 420, and 421 in the Final Report of the Royal Commission, wherein it is shown that the risks attending even a mild virus, with the operation carefully performed, may result in local inflammation, febrile illness, erysipelas, scrofula, contagious forms of eruption, such as are classed under the names of *porrigo* and *impetigo contagiosa*, injury, and even death. The death of a child vaccinated with calf "lymph," who suffered from "severely ulcerated arms, and ulcers in several parts of the body and limbs," is recorded in paragraph 419. We are further told that no doubt can now be entertained as to the possibility of conveying "syphilis in the act of vaccination," whilst the "not unreal risks of calf lymph" are likewise alluded to,

The Dissentient Commissioners refer to what is known as the "Leeds case," where Emily Maud Child was syphilised and killed by vaccination.

The shameful history of this case proved once again that the Medical "Augean Stable" of the Local Government Board required sweeping out. Full particulars of this case may be found at pages 75-79, "Vaccination Inquirer," August, 1889, and pages 48 and 58, "Vaccination Inquirer," July, 1891.

After dealing at some length, in paragraphs 213-215, with the various aspects of the Leeds case and its confirmation of the opinions of Auzias-Turenne and Dr. Creighton as to the close affinity of cow-pox with syphilis, their indistinguishable features, their similarity of characteristics, and identity of results under mercurial treatment, the Dissentient Commissioners thus conclude paragraph 216:—"We "should only have expected vaccination to be to "a very slight extent the cause of deaths from "syphilis, and likely to be overshadowed by more "potent influences, unless indeed there were "ground for believing, as has been alleged on "high authority, 'that a large proportion of the "'cases of apparently inherited syphilis are in "'reality vaccinal.'"

These grave observations of the Dissentient Commissioners show only too clearly the nature of, and what may be expected from the use of, animal or calf "lymph."

"Le Progres Medical" (a journal published in Paris), of 3rd November, 1888, contains the

report of a paper, by Dr. Pourquier, on the cutaneous symptoms consequent upon animal vaccination, in which the author refers to 800 infants ulcerated by animal virus, observed by Protze, of Elberfeld, and also to an epidemic, reported by Professor Brouardel, consequent upon vaccination with animal virus, in which sixteen of the inoculated children died within twenty-four hours.

These dreadful examples could be indefinitely multiplied, and they reveal and prove the danger of animal virus. But in what way does this new system of vaccination—if it is vaccination—differ from that of Jenner's day? It was animal vaccination then, it has (more or less) been animal vaccination all along, and it is animal vaccination now! It began with corruption from a diseased horse's heel and a diseased cow's udder;—but although it has been "humanised," the taint of animal virus is still continued, and now we are back to animal virus again.

It would appear from all this that "animal lymph" or "calf lymph" is no better, perhaps worse, than "humanised lymph." One thing is certain, that it may add bovine diseases to the already long list of human maladies, which there is grave reason to fear have been sown broadcast by the practice of vaccination.

CHAPTER XCIX.

"GLYCERINATED CALF LYMPH."

CRUDE calf or animal "lymph" has been denounced by many eminent medical authorities and medical journals.

One of the objections to animal vaccine was that the "lymph" required "storing," and was liable to infection by extraneous germs, whereas the arm-to-arm system maintained a fresh supply. To meet this difficulty, glycerine has been added as a preservative, and it is also said to possess other benign qualities. So "diluted lymph" has become the fashion—"pure glycerinated calf lymph." Although this latest "brand" is said to be "perfection" in vaccine viruses, its escutcheon is already tarnished by a series of disasters. The Royal Commission were fully aware of these, even when they recommended its use. No better proof is needed of their wilful and determined disregard of facts than this recommendation, in the face of the knowledge they possessed, and the condemnatory evidence of official witnesses respecting this particular "blend" of "lymph." Long before the Royal Commission reported in its favour, or Mr. Chaplin flourished this "great scientific discovery" in Parliament, experiments had been in vogue—especially on the Continent—with dilutions of aqueous glycerine and calf virus.

The Local Government Board, in explaining away a wholesale disaster at Rügen (Germany), whereby 320 persons were infected with a loathsome contagious disease by vaccination, said :—
"The operation was not 'vaccination' as the word is understood in England, but consisted of insertion into the arm, after the manner of vaccination, of a mixture of vaccine lymph, thymol-solution, and glycerine, of which mixture by far the largest part must have been glycerine."—Letter to Arthur O'Connor, Esq., M.P., dated 28th June, 1886.

The German Commissioners appointed to investigate this disaster think that the cause "was not the vaccine merely, and that it was not the thymol; then they fall back upon the glycerine as being possibly the cause of it" (though the glycerine is expressly stated to have been the purest).—Summary by Lord Herschell, Royal Commission, No. 9,813.

Sir Geo. Buchanan, M.D., F.R.S., Chief Medical Officer to the Local Government Board, referring to this Rügen disaster, said :—"I have heard of dilutions of lymph with glycerine, always from people complaining of the lymph. It will, I trust, be long before such preposterous adulterations of vaccine give the opportunity of investigating their results in English practice."—Transactions of the Epidemiological Society, Vol. V., pages 117 and 118.

The Royal Commission on Vaccination record "84 cases of serious injury, resulting in 24 deaths, from the use of glycerinated lymph!"—Sum-

marised from Final Report, Appendix IX., by W. Scott-Tebb, M.D., D.P.H.

"Some of the best-qualified witnesses who have afforded us their assistance have expressed a deliberate preference for arm-to-arm vaccination, believing that the advantages of calf lymph are more imaginary than real."—Royal Commission, Final Report, No. 433.

Drs. Barlow and Acland, who were engaged by the Royal Commission to investigate cases of injury, think that "calf lymph as now usually employed tends to produce more severe inflammatory reaction than that which has been humanised."—Minority Report, No. 186.

This belief of Drs. Barlow and Acland is widely shared by many other medical men who have used what is called "animal" or "calf lymph."

So that the Royal Commission knew all about the dangers of "glycerinated calf lymph." It is amazing how they could recommend its use, except on the hypothesis that, having condemned humanised arm-to-arm vaccination, it would never do to drop the practice altogether; the profession must be let down gently.

There now remains the consideration of the question: Is "glycerinated calf lymph" any better than either "humanised lymph" or "crude calf lymph"? Perhaps the best way of introducing the reader to a consideration of that question will be to first ascertain how this stuff is produced.

A full description is to be found in an official

"Report to the Local Government Board, presented to Parliament by Royal Command, on the Preparation and Storage of Glycerinated Calf Vaccine Lymph," by Sir Richard Thorne Thorne and Dr. S. Monckton Copeman.

Sir R. T. Thorne, who wrote the introduction—addressed to the Right Hon. Henry Chaplin, M.P., then President of the Local Government Board—says:—"Shortly after the issue of the "Report of the Royal Commission on Vaccination last autumn, I received your instructions that "I should, together with Dr. Monckton Copeman, "visit certain cities in different countries on the "Continent of Europe, with a view of obtaining "information as to the methods adopted, by the "respective authorities and others concerned, in "the distribution of vaccine lymph derived from "the calf, more especially in reference to the "preparation, storage, and distribution of glycerinated calf lymph."

This investigation appears to have been carried out owing to a suggestion of the Royal Commission, who, being strongly impressed with the inevitable abandonment of arm-to-arm vaccination, found a substitute in the so-called discovery, on the storage of vaccine lymph in glycerine, announced by Dr. Copeman to the International Congress of Hygiene, which met in London in August, 1891.

"The conclusions at which he arrives," say the Commissioners, "are that the addition of "glycerine, whilst it leaves the efficacy of the "lymph undiminished, or even increases it, tends

"to destroy other organisms"; and they add that:
 "The question is one a further investigation of
 "which is obviously desirable."

Visits were therefore made to Paris, Brussels,
 Berlin, Dresden, Cologne, and Geneva. *Inter alia*,
 Sir R. T. Thorne observes that:—"In each of
 "the countries concerned, vaccination with calf
 "lymph has become the habitual, if not the
 "universal practice."

"In only one of the places visited—namely,
 "Paris—did we find that vaccination was carried
 "out under official sanction with crude calf lymph,
 "and even there the process was limited to vac-
 "cination direct from calf-to-arm, all lymph stored
 "for distribution being glycerinated calf lymph."

After referring to the abandonment of both
 "arm-to-arm" and "direct-from-the-calf" vaccina-
 tion, the reasons for this change are given:—

"The governing reason has been the confirma-
 "tion by competent bacteriologists of the results
 "obtained by Dr. Copeman, to the effect that, by
 "the admixture to calf lymph of a 50 per cent.
 "solution of pure glycerine in sterile water, and
 "by subsequent storage of the lymph material in
 "tubes, *under due precautions*, for a term of
 "several weeks, the preparation remained quite
 "active as vaccine, whilst a very remarkable
 "germicidal effect was produced on extraneous
 "micro-organisms in the lymph, even including
 "certain pathogenic organisms which had been
 "purposely added to the lymph material. The
 "second reason was that, by reason of the
 "admixture referred to, the amount of vaccine

"procurable from a given calf could be greatly, "even enormously, increased, and that, within "certain wide limits, this could be done without "interfering with the insertion-success following "on the use of lymph."

Alluding to the usual practice at the Local Government Board's Vaccination Establishment, to use one calf for only 200 to 300 vaccinations, Sir R. T. Thorne points out that from a single calf, with "glycerinated lymph," 4,000 to 6,000 vaccinations can be carried out, and that from "lymph" prepared in their presence, one calf would suffice for 15,000 vaccinations. Whether this wonderful result was owing to these distinguished experts being present we are left to surmise, but certain it is that some of this "Berlin lymph" was brought to England, and used "at intervals of nine, eleven, and thirty-seven days after its collection," resulting "in a mean insertion-success of 92 per cent. in 76 vaccinations" of "five insertions" in each case.

Sir R. T. Thorne then significantly observes:—"Storage of this particular sample for a much "longer period did not give satisfactory results."

Other samples of "glycerinated lymph" were brought home from the various places visited, and with "five insertions" reached 97, 98, 99, and 100 per cent. of successes, the intervals of use varying from seven to thirty-one days after collection.

Various details of preparation are then enumerated, and the precautions taken to avoid the risk of "conveying tuberculosis," which Dr. Thorne

considers is "remote," only "healthy calves" being used. He also says:—"The tubercle bacillus, when experimentally added to a mixture of lymph and an aqueous solution of glycerine, rapidly loses its vitality."

Although Sir R. T. Thorne says that the information obtained "does not profess to be complete, much remains to be ascertained by careful scientific research," he does not hesitate on that account to offer to Mr. Chaplin certain conclusions for his consideration. First, that "it is desirable that both primary and secondary vaccination, carried out under the auspices of the Government, should be performed exclusively with vaccine lymph derived from the calf." Secondly, that "for a time at least the system of calf-to-arm vaccination should be retained at the Board's Animal Vaccine Station, for the purposes of comparing its results." Thirdly, that "the distribution of calf vaccine from the National Vaccine Establishment should be limited to glycerinated or similar preparations of lymph and pulp material, in air-tight tubes, or other glass receptacles." Fourthly, that "the Board's Animal Vaccine Station should be reorganised, and should include a properly-equipped laboratory, under the direct supervision of a bacteriological expert."

CHAPTER C.

HOW "GLYCERINATED CALF LYMPH" IS "MANUFACTURED."

FOLLOWING this introduction comes Dr. Copeman's report. He starts with Paris, and, after describing the many precautions taken, one of which is "to prevent the calves from being able to lick the inoculated area of their body," and another to keep the straw bed "free from urine," for which reason "only cow-calves are employed," of a special breed, informs us that they are weaned at the age of two months, cost 147 francs, and are re-sold to butchers at a loss of 30 to 40 francs each. Dr. Copeman says "tuberculin is not employed," as, if signs of tuberculosis are found, the "lymph" is destroyed. There is, undoubtedly, a wide open door for disaster here.

The calf is strapped to a tilting table, the right side being "thoroughly scrubbed with soap and hot water, and then shaved. . . . A "number of superficial incisions (about 100), each "about one inch long, are then made in . . . "several rows . . . *en echelon*. The lancet "employed for the purpose has a spear-headed "blade. . . . Over each incision a drop of "glycerinated lymph is allowed to fall from a "glass tube, and the drop is rubbed in with the "flat portion of the blade of the lancet. The "process is carried out by one of the laboratory "servants, and is a somewhat lengthy one.

"When the 'lymph' has dried, the calf is removed from the table and taken back to its stall.

"The vaccine material is always collected on the sixth day. The calf is once more placed on the table; or, if material is required for immediate use only, it is usually allowed to stand. The vaccinated area is washed with warm water, and dried with clean soft cloths. Each vesicle is now clamped separately, and the crust first removed with a lancet, which is then wiped on a cloth pinned to the front of the cotton blouse which the operator has previously donned.

"The vesicle is then thoroughly scraped with the edge of a somewhat blunt lancet, and the resultant mixture of lymph, epithelial tissue (skin), and blood is transferred to a small nickel crucible set in a wide wooden stand on a table close to the operator.

"To the pultaceous (gruelly) mass contained in the crucible there is added about an equal quantity of glycerine.

"The mixture of pulp and glycerine is triturated in a mixing machine . . . driven by a small electric motor.

"The mixture, having thus been rendered thin and homogeneous, is received in a clean sterilised nickel crucible placed beneath the machine, but with a view of still further *improving its appearance* and of removing any extraneous matters, *such as hairs*, it is afterwards pressed through a small brass-wire sieve

"consisting of extremely fine gauze into an agate mortar. This is done by means of a bone spoon, and there is left on the surface of the gauze nothing but a very small quantity of *epithelial tissue* together with a few *hairs*. The mixture is further triturated in the mortar with an agate pestle, and is then ready for filling into the tubes in which it is distributed."

What dreadful agony the poor animals must suffer for the three-quarters of an hour occupied by this process of "clamping," etc.! But even this torture is exceeded by the "calf-to-arm" process, as described in the Report, in which "compression forceps" and "lancets" for "scraping" are used for each separate operation.

We are told that, before the mixing process, "no accurate measurement of the quantity" of "lymph" is made, so that after all the scientific research expended upon it, it is somewhat of a haphazard business.

Two samples of this "lymph" were brought to England, and Dr. Cory vaccinated 96 children from one, and 27 children from the other.

At Brussels, bull-calves "are used exclusively, Dr. Degive believing that the finest vesicles are obtained on the scrotum."

A sample of this Brussels "lymph" was brought away, but as it "was used for certain bacteriological investigations," there is no "record as to its success for the purposes of vaccination."

At Berlin, cow-calves are used. The incisions

"are made with a blunt knife, so as to draw as little blood as possible."

When the "lymph" is collected, "absolute alcohol is poured over the vaccinated area." After this has evaporated, "the surface is treated with ether . . . the skin is put on the stretch and scraped . . . with a sharp spoon."

The relative proportions of the precious final product are :—

"Epithelial pulp	1 part	(6.70 per cent.)
"Glycerine	- 7 parts	(46.65 per cent.)
"Boiled water	- 7 parts	"(46.65 per cent.)

After use, the calves are said to be sold to the Jewish Rabbi, to be slaughtered for human food. Some of this "lymph" was brought home, and 109 children were vaccinated by Dr. Cory at four different periods, resulting in percentages of success varying from 67.5 to 97.1. After keeping for six months, its activity "had practically disappeared."

At Dresden, "by preference" they use cow-calves of from six to eight weeks old. These animals are hired from a dealer for 20 marks each, and are returned to him after the "lymph" has been removed. "The pulp is collected by scraping" with a spoon, but as they scrape "the same surface again and again, a not inconsiderable amount of blood becomes mixed with the epithelial scrapings." Some of this precious "pulp," obtained with such infinity of torture and cruelty, was brought to England, and Dr. Cory vaccinated 15 children with five insertions each, and all gave a satisfactory result.

At Cologne, similarly cruel operations are carried on, but here the calves are mercifully killed *before* the "lymph pulp" is collected, so that this "lymph" is taken from *a dead animal*, which is immediately sent into the market, and sold for man's consumption!

The "finished emulsion"—removed by a sharp spoon—is composed as follows:—

"Pulp	-	5 grammes	(6.25 per cent.)
"Water	-	25 grammes	(31.25 per cent.)
"Glycerine	-	50 grammes	" (62.50 per cent.)

A sample of this valuable "emulsion," obtained from *the dead carcass* of an animal," was actually brought to England, and Dr. Cory vaccinated two groups, in all 55 children, "with an insertion-success of 93.3 to 98.8 per cent."

At Geneva, after being tortured in a similar manner, the calves are sold at a loss of about £1 on each animal. "Any blood which exudes" from the sores is wiped off, and then "the vesicle pulp is removed by scraping with a sharp spoon." Glycerine and water are added "for attaining the following standard":—

"Vesicle pulp	-	1 part	(25 per cent.)
"Glycerine	-	2 parts	(50 per cent.)
"Water	-	1 part	" (25 per cent.)

After trituration, the "resulting emulsion" is used for human vaccinations, and the "seed material" for the vaccination of calves. "Occasionally clamp forceps" are brought into action. The "crust" being first removed, the vesicle is "gently (?) scraped with a lancet"!

CHAPTER CI.

DR. KLEIN'S MICROBIC EXPERIMENTS.

THE result, then, of the visit of these two gentlemen to the Continent was to start several new brands of "lymph" in England; from Paris, Brussels, Berlin, Dresden, and Geneva, one of these sources being from a dead animal's carcass, and 302 children being experimented upon. No one knows the original sources of these so-called "lymphs"—whether they are obtained from small-pox vesicles—which is probable—or are impregnated with syphilis, scrofula, or tuberculosis. No microscopic examination can determine this point.

The reports are ominously silent on the important question—Whence was the "seed" virus of these "lymphs" derived? Why, if the "seed lymph" was pure, all this fuss, and all these elaborate efforts and processes to secure purity? The fact is, they know, and we know, that the "seed" substance is inherently filthy, as it is bound to be—if it consists, as we are certain it does, of the virus of a filth disease, most probably small-pox.

As to the safety supposed to be provided by glycerine, or the removal of infection, Dr. Klein's experiments are conclusive. The "Vaccination Inquirer," of 2nd May, 1898, page 28, informs us

that "in the very same Supplement to the
 "Twenty-Sixth Report of the Local Government
 "Board which contains the recommendations of
 "glycerinated calf lymph, we find the report of
 "the experiments which Dr. Klein has been per-
 "forming on the microbes of vaccinia and variola,
 "and we there read, page 270 :—

"As showing how persistently some microbes
 "originally present in the crusts preserve their
 "vitality in undiluted glycerine, I may mention
 "a plate cultivation made on glycerine agar with
 "one big drop of a crust emulsion in undiluted
 "glycerine nine months old. In this plate there
 "came up :—

"14 colonies of staphylococcus aureus and
 "sarcina lutea.

"1 colony of streptococcus.

"1 colony of staphylococcus albus.

"11 colonies of various bacilli to be described
 "below."

"And, so far from the particular infection
 "of erysipelas being removed, we find that on
 "the very next page (271) of Dr. Klein's report
 "it is written :—

"STREPTOCOCCUS ERYSIPELATOS. — This mi-
 "crobe was obtained in a plate culture made from
 "an emulsion of crusts which had been stored
 "for over four months in undiluted glycerine.
 "That the microbe was the streptococcus of
 "erysipelas was proved by injection of a broth
 "culture of it into a rabbit's ear. Definite
 "erysipelas was produced ; moreover, material
 "from the erysipelalous ear of this animal, when

“‘injected into the ear of another rabbit, gave
“‘again a positive result.’

“It is clear, then, that the streptococcus of
“erysipelas, when it happens to be present in
“crusts of variola, is not readily got rid of; not
“necessarily by storage in undiluted glycerine for
“over four months, nor by storage in 50 per cent.
“glycerine broth for eighteen days.”

From this it is conclusive that “lymph,” after
being mixed with glycerine, retains its capability
of implanting the germs of disease. Whether or
not it retains its alleged prophylaxy against
small-pox, is entirely another matter.

Dr. Klein, therefore, disposes, once for all, of
the theory that storage of lymph in glycerine is
destructive of extraneous disease germs. The
process of their elimination is not facilitated or
rendered easier by such storage, rather the
contrary.

Dr. Klein's graphic description of the infinitesimal character of the “colonies” of microbes to which he refers is further exemplified by Professor Pettenkofer's example of the germ theory when he says :—“We find that the imper-
“ceptible particles of dust which have such
“influence for good or evil on the health of
“mankind are in all probability organised bodies
“of the smallest kind, or something produced by
“them, many millions of which can be collected
“together on the head of a small pin. To the
“ordinary eye, their mysterious presence reminds
“us of the old belief in unseen spirits, who
“occasionally ascend from earth or water and
“make many places unhealthy.”

CHAPTER CII.

"SMALL-POX VIRUS VACCINE."

CORPSE "lymph" has been in use, both before and since the diluting process of glycerine. As we have seen, corpse lymph is in regular use in Dresden, from which source a series of vaccinations have been performed in England, and it is now probably in full swing in this country. We are told that "small-pox virus" is not now used, or even allowed to be used, in the United Kingdom.

During the debate in Parliament on Supply, 22nd June, 1887, Mr. Ritchie, in the course of his speech, said:—"The honourable member for East Donegal (Mr. Arthur O'Connor) said something about lymph. He said, I think, that it was the virus of modified small-pox. I cannot agree with the honourable member in his definition as to that point. I am informed that no lymph which is used for vaccination of any kind has ever, within the memory of man, passed through the human body. Dr. Jenner's first lymph was derived from an animal source; and the lymph which is now sent out is calf lymph. None of the lymph, I say—at all events in historic times—has passed through the human body; therefore I cannot think that the honourable gentleman is in any way justified in calling the lymph modified small-pox."

Mr. Arthur O'Connor : "What is it, then?"

Mr. Ritchie : "I am afraid I am not qualified to give the honourable gentleman a medical opinion of what lymph is. I have told him whence it is derived, and he will see there is no ground for calling it modified small-pox." The fact is, no one knows what is being used, but we have some testimony as to the derivation of "lymph" from small-pox.

Miss Loat has contributed ("Vaccination Inquirer," July, 1912, page 87) some extracts translated from an article on "German Vaccine Institutions," by Dr. Wolfgang Bohn, which appeared in "Der Impfgegner" for October, 1911.

The Doctor mentions a case of small-pox in Bavaria from which matter was taken and calves vaccinated with it by the Director of the Munich Lymph Institute.

"A small-pox case showed itself in Perlach, east of Munich; the lymph was taken from the sick bed, and was after three-quarters of an hour already in the cooling chamber of the Institute. Fourteen hours after taking it from the sick person the attempts began. Thirty-one calves (page 200) were vaccinated with the small-pox matter."

Dr. S. Monckton Copeman, in a lecture delivered at the Victoria University of Manchester, on 25th April, 1904, in speaking of the way in which vaccine lymph is made, said:—"The most satisfactory material was found to be vesicle pulp, obtained in the *post mortem* room from cases of discrete small-pox that had died

"during a comparatively early stage of the eruption."

Dr. Copeman goes on to tell how, after this "pulp" had been mixed with glycerine, it was inoculated into monkeys, next into calves, and then into children.

In face of this, it is useless to deny that small-pox virus is being used, even as "glycerinated calf lymph." In fact, the "lymph" would be useless without it. We find, therefore, from a mass of medical and other testimony, that the "lymph" now in general use is as bad as (or worse than) any that has preceded it, because it has been established:—

(1) That no "lymph" can be obtained without blood corpuscles; therefore, all "lymph" contains them.

(2) That blood corpuscles are known to be the vehicle by which disease is conveyed through vaccination.

(3) That glycerine is proved to be a nutrient for disease germs, and, therefore, "glycerinated lymph" cannot, and does not, modify the evil effects of diseased virus.

(4) That water mixed with vaccine "lymph," although harmless has, apart from dilution, no beneficent or appreciable effect on the "lymph" when used, and, therefore, the dangers arising from vaccination with "glycerinated calf lymph," or with any kind of "lymph," remain undiminished in full activity and force.

Since the introduction of "glycerinated calf lymph," sudden deaths following vaccination have

become more frequent, and in September, 1897, inquests were held on three children who died in the London Hospital as the result of having been vaccinated with "glycerinated calf lymph."

Press reports of numerous similar cases, which have occurred during the past few years, will be found in the pages of the "Vaccination Inquirer."

On 13th March, 1900, the Under-Secretary for War, replying in the House of Commons to a question by Mr. T. Bayley, M.P., admitted that three cases of pemphigus, two of which were fatal, had occurred from the use of "glycerinated calf lymph" supplied from the Army Vaccine Institute at Aldershot. The Registrar-General himself, since its introduction, records 251 deaths from 1899 to 1910. It is, therefore, evident that "glycerinated calf lymph" must follow its predecessors into the limbo of obscurity. Let those who wish to use it know of what the virus is composed—viz., an uncertain proportion of glycerine and water, both, perhaps, harmless, and also equally useless and impotent for the purpose of inoculation against small-pox, without the remaining active and potent ingredient of a disease virus. This virus is obtained from the putrid sores of inoculated monkeys, calves, and other animals, or from animal or human corpses, and may contain some germs of all. It is even then useless, *ex hypothesi*, unless it also contains the germs, or virus, directly derived from small-pox itself.

On the other hand, without either preventing or mitigating small-pox, it may impart syphilis,

or any other of the forty or fifty known inoculable diseases; or, as it has been known to do in so many recorded instances, it may inflict death.

Vaccine pus is not a remedial agent, but a poison. In one sense, the purer it is, the more certain and fatal in its effects. Morally, vaccination has become a crime, and illustrates the aphorism, "Scratch the green rind of a sapling, or wantonly twist it in the soil, the scarred and crooked oak will tell of thee for ages to come."

CHAPTER CIII.

VACCINATION.

VACCINATION — so-called — is the operation of ingrafting cow-pox—or whatever for the time being does duty for cow-pox—on human beings, with a view to protecting them from small-pox. Professor Tyndall's theory as to how this is supposed to be accomplished is as follows:—

“It is not difficult to see that a crop of a given parasite may so far use up a constituent existing in small quantities in the body, but essential to the growth of that parasite as to render the body unfit for a second crop. The soil is exhausted, but to effect this a parasite less vigorous and destructive may suffice; and if, after having by means of a feebler organism exhausted the soil without fatal result, the more highly virulent parasite be introduced into the system, it will prove powerless.”

Although the explanation given by this eminent scientist may or may not be the correct reason of what success is claimed for vaccination in averting or lessening the danger of small-pox, there is no doubt that the national health is materially injured by the practice. The relative constituents of the vital fluid must of necessity be seriously altered by the introduction of these living organisms into the body by inoculation, so

as to permanently injure the nervous system in every case; and this possibly accounts in some degree for the rapid increase of the various forms of insanity.

Whether vaccination protects or not, or whether it protects for a long or short period, no one, not even a so-called "expert," can (even on the evidence of its own advocates) determine, and there are no means and no known scientific methods whatever of testing what the amount of "protection" is, if any, or when it wears out.

That vaccination has been bolstered up by fraud, very few will now deny. As a sample of the arguments by which this has been done, two flagrant instances are here enumerated:—

I.—THE "CEARA" FABLE.

Mr. Ernest Hart, at page 4 of "The Truth About Vaccination," says:—"Mr. Ashbury, the "senior Member of Parliament for Brighton, in "the course of a recent yachting cruise, visited "the seaport town of Ceara, in the Brazils. "Finding that an epidemic of small-pox had "recently partially depopulated the town, Mr. "Ashbury inquired into the facts. He found that "in one cemetery alone, the burials of persons "dead of small-pox amounted to 27,064 from "August, 1878, to June, 1879. In December, 1878, "no fewer than 14,375 persons who had died of "small-pox were buried in this cemetery, and one "day as many as 812 such persons were interred. "He had not time to obtain the official returns "from the other cemetery, but he was informed,

"on good authority, that the burials there during "the same period were about 13,000. Thus out "of a population not exceeding 70,000 persons, "no fewer than 40,000 deaths from small-pox had "taken place."

This was repeated by Dr. Carpenter at a vaccination debate in Steinway Hall, London, on 3rd February, 1882, but, finding the statement unreliable, it was struck out of the report of the meeting at Dr. Carpenter's own request in a letter to Mr. William White, Editor of the "Vaccination Inquirer." The reason was not far to seek, for, in a semi-official work on Brazil, by Mr. William Scully, Editor of the "Anglo-Brazilian Times," at page 248, we read:—"Fortaleza, or Ceara, the "capital of the province . . . is the port for "the foreign trade of the province, and has about "20,000 inhabitants." Mr. Ashbury, it seems, had not time to ascertain how 40,000 persons could die of small-pox in the space of one year out of a population of only 20,000. Nor did he consider how it was that the town was not only inhabited, but appeared populous and prosperous on his visit.

II.—THE "FRANCO-GERMAN" STATISTICAL FRAUD.

Another fraudulent statement which has been accorded world-wide publicity is that concerning small-pox in the French and German Armies during the Franco-German War.

The history of this famous statistic is very instructive as to the slipshod manner in which arguments in favour of vaccination are fabricated.

During the sittings of the Statistical Congress

at St. Petersburg, in 1872, one of the speakers, afterwards said to be Dr. Roth, is reported to have stated that the small-pox deaths in the indifferently vaccinated French Army were 23,469, while those in the efficiently vaccinated German Army were only 263. In all subsequent repetitions of this fable, the former figure has remained constant, while the latter has varied, sometimes being 261, at others 316, 459, or 3,162. These variations do not affect the argument, which was put forward, not as a proof of the benefits of vaccination—as all the small-pox deaths in both armies were of vaccinated or revaccinated soldiers—but as a proof of the benefits of compulsory revaccination in the German Army, as against the French Army, where revaccination was alleged not to be compulsory.

Mr. John Pickering printed the figures in the "Anti-Vaccinator," of 1st November, 1872, with some caustic comments casting doubt on their accuracy. They also appeared in the "Vienna Medical Journal" ("Wiener Medizinische Wochenschrift"), the "British Medical Journal," the "Daily News," and from these and other papers were spread broadcast by the newspapers throughout the world. Mr. Pickering published at the same time a letter, dated 28th October, 1872, from Dr. A. Bayard, of Paris, who stated that the idea of revaccination originated in France, and that "in France there are few subjects above the age of twenty years who have not been revaccinated, but all the soldiers have certainly undergone the operation." Respecting

the alleged 23,469 small-pox deaths, Dr. Bayard asks—"Whence was the information obtained?" "The necessary documents are not to be had "from the Minister of War."

In 1883, as a debate in Parliament was expected on Mr. P. A. Taylor's motion, this statistic was vigorously revived. Dr. W. B. Carpenter addressed a letter, 23rd April, 1883, to the Right Hon. Sir Lyon Playfair, quoting these figures. A copy of this letter was sent to all members of the House of Commons. Dr. Carpenter repeated the "fable" in a letter to the "Daily News," 8th May, 1883. In this letter he says:—

"I make these statements, not upon heresay "evidence or reports of private correspondents, "but upon the official account published in 1873 "by Dr. Colin, then *Medecin Principal de l'Armée*. "His treatise, '*La Variole*,' is easily obtainable to "anyone who wishes to know the real truth of "this matter; and from its full and explicit "details of the facts of this remarkable case, I "cannot see what higher appeal can be made."

Sir Lyon Playfair, on eloquently detailing the figures during his speech on 19th June, 1883, exultingly flourished M. Leon Colin's pamphlet before the delighted and astonished House, silencing all objectors by triumphantly exclaiming, "I got it from the Physician-General of the French Army!" It is said that this hypnotic display influenced more votes than any other speech ever made in Parliament.

However that may be, Mr. H. D. Dudgeon, acting on Dr. Carpenter's advice, obtained

M. Leon Colin's pamphlet, but instead of finding "full and explicit details of this remarkable case," as Dr. Carpenter said he would, Mr. Dudgeon only found an official notice of 261 small-pox deaths in the German Army, but not a word about the 23,469 small-pox deaths in the French Army. Dr. Colin "*estimates*" the small-pox deaths in the French Army of 170,000 men at 1,600, with 11,500 cases. Applying this ratio, Mr. Dudgeon says that the 23,469 deaths would mean not less than 166,000 cases and an army of 2,400,000 men, and even then the numbers of the "original French Army" would still have to be added. This is the "*reductio ad absurdum*" with a vengeance.

Dr. Carpenter promised Mr. Alexander Wheeler either to substantiate the figures or withdraw them. On finding they could not be verified, Dr. Carpenter soon after entirely withdrew the statement in a long letter to the "Daily News," of 7th August, 1883, in which he said:—"I requested Earl Granville to obtain what information he could on this point; and after considerable delay I have received, through Colonel Cameron (Military Attaché to the Embassy in Paris), an explicit statement that the army medical returns of the Franco-German War are so incomplete as not to supply the total for which I asked. If in adopting Dr. Roth's estimate of it without any suspicion of its insecure basis I have been blameworthy, I now make the fullest amende in my power."

Notwithstanding this withdrawal, the "authorised edition" of Sir Lyon Playfair's speech was

afterwards published with the lying statistic repeated most deliberately, Dr. Thilenius being named as the authority, in place of Dr. Leon Colin. Later on, in 1889, Mr. Arthur Hopkirk, M.D., as a witness in favour of vaccination, declared he believed the statistic on the authority of a German medical, the "*Klinische Wockenschrift*," for August, 1889, but admitted having taken no means to test its accuracy in France. (Q. 1,653-60, Royal Commission, Second Report.) Although he was aware of a French official paper which stated that the medical statistics of 1870-71 are wanting, he nevertheless stuck to his belief, although not a shred of authority for it could be found (Q. 6,774-88, Royal Commission, Second Report), and it had been withdrawn by Dr. W. B. Carpenter, who was unable to obtain confirmation, although he tried to do so through the Foreign Secretary, Earl Granville.

As the 23,469 deaths of Frenchmen proved to be fabulous, Mr. G. S. Gibbs, of Darlington, wrote to the German Army Medical Department at Berlin, to inquire about the 263 Germans who were said to have died of small-pox during the Franco-German War. On 30th July, 1883, Mr. Gibbs received a reply from the German Minister of War, in which he said:—"For the time from July, 1870, to June, 1871 (the twelve months of the war), the numbers wished for are not recorded, and regret is expressed that on this account the desired information cannot be given." Thus the 263 Germans, like the 23,469 Frenchmen, proved to be fabulous, and disappeared into obscurity.

I would not have referred to this foreign fabrication at such length, but that the discredited and officially-controverted fable continues to do duty in the armoury of many pro-vaccinists even now, nearly thirty years after its complete withdrawal.

Such are two of the untrue and flimsy pretences upon which the compulsory law of vaccination has been maintained.

VACCINATION IN GERMANY.

Germany affords another example of the kind of argument adduced. The immunity of Germany from small-pox is frequently cited, and it is sometimes asked—Was it the German Revaccination Law of 1874 which reduced small-pox in Germany? No, certainly not, because that law, passed in 1874, came into effect in 1875, and by that time the beneficent work was done. Small-pox deaths in Germany per million were:—In 1871, 2,432; in 1872, 2,623; in 1873, 356; in 1874, 95; in 1875, 36. The effect cannot precede the cause. In 1834, a Prussian law required the revaccination of every recruit with ten insertions in each arm. This, under conscription, revaccinated practically every adult male. In 1871-72 Prussia lost 124,948 by small-pox. Were all the adults among them females? Certainly not. Moreover, the better-vaccinated male population, like that in Italy, furnished the highest small-pox death-rate. Berlin, in the same epidemic, had—according to the official Government publication, entitled “*Beiträge zur Beurtheilung des Nutzens der Schutzpockenimpfung*”—17,038 vaccinated cases,

of whom 2,240 were under ten years of age, and of these children 736 died. What would be the use to them of revaccination at the age of twelve?

As rigorous vaccination and revaccination failed to save Berlin and Germany from the terrible slaughter inflicted by small-pox in 1871-72, the Germans might well inquire into the reason. The conclusions at which they arrived are conclusively demonstrated by the fact that no less a sum than £9,500,000 was spent at Berlin, in sanitary and health works of various kinds, from 1871 to 1892. Not only has similar work been carried out more or less all over Germany, but a system of notification and isolation (after the pattern, but much more strict than the "Leicester Method") is now in full operation. Immunity from small-pox is due to these measures, and in no instance are Professor Crookshank's words more applicable than to Germany when he wrote:—"I maintain "that where isolation and vaccination have been "carried out in the face of an epidemic, it is "isolation which has been instrumental in staying "the outbreak, though vaccination has received "the credit."—"History and Pathology of Vaccination," Vol. I., page 465.

It seems to be overlooked that susceptibility to zymotic diseases, to which small-pox contributes only a fractional share, is very small, but, although changing in its incidence, through meteorological influences or other unknown conditions it probably never exceeds from one to two and a half per cent. of the population. Is it worth while cow-poxing (with its indisputable dangers) the whole community for so small a

risk? The fact is, that the perils from vaccination far outweigh, both in number and deleterious effect, any risk arising from small-pox, whilst the danger of contracting that disease is still further minimised in the case of those who pay reasonable regard to the natural laws of health.

VACCINATION IN ITALY.

Dr. Carlo Ruata, M.D., in a very able and exhaustive public address given in November, 1898, at the opening of the session of the University of Perugia, Italy, at which he is Professor of Materia Medica, realises the above fact, and thus summarises the indictment against vaccination:—

“Whereas the aim of therapeutics is to cure
“sickness in our bodies, and that of hygiene to
“maintain them in health by a salubrious
“environment, vaccination undertakes to modify
“our robust, healthy bodies in order to adapt
“them to an insalubrious environment. It
“belongs neither to therapeutics, nor to hygiene;
“it belongs to that fatal, fanciful, spurious
“science which, rejecting the teachings of experi-
“ence, rests on dogma and creed, which in other
“departments of sociology have produced as many
“evils as vaccination has produced in medicine.
“Vaccination is a monstrosity, the misbegotten
“offspring of error and ignorance; and, being
“such, it should have no place either in hygiene
“or medicine.”

Another strong argument against vaccination is supplied in a letter written by Professor Ruata, on 10th May, 1899, wherein he says:—“There is
“another consideration which has a certain

"relation with vaccination and small-pox in the Italian Army. Our young men are obliged, by law, to enter the army at the age of twenty, so that the greatest part of them pay this tribute to the State. The consequence is that, after the age of twenty years, men are by far better vaccinated than women, and after the age of twenty small-pox should kill less men than women. I wished to ascertain if this was true, and here are the figures representing the numbers of deaths from small-pox in men and in women before and after the age of twenty during our great epidemical years, 1887-88-89 :—

Deaths.	1887.		1888.		1889.		Total.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
Under								
Twenty	5,997	5,983	7,349	7,353	5,626	5,631	18,972	18,968
Over								
Twenty	2,459	1,810	1,990	1,418	1,296	863	5,745	4,091

"All the following years until the last known (1897) give the same results."

Professor Ruata has just suffered prosecution by the medical profession of Italy for the free and public expression of his views against vaccination and the laws enforcing it. Professor Ruata himself made a closely-reasoned and eloquent historical defence, upholding and emphasising all he had ever said or written against vaccination, and he obtained a triumphant and complete verdict of acquittal. The day will come when his speech will be regarded as a masterpiece in favour of sanitation and hygiene, as opposed to vaccination. (See "Vaccination Inquirer," December, 1912, and January, 1913.)

CHAPTER CIV.

EMINENT OPINIONS ON VACCINATION.

JOHN HUNTER says:—"The introduction by "inoculation of mineral or vegetable poisons "into the blood is hazardous, and in certain "quantities may be destructive; but the intro- "duction of animal products from another living "body, be it a man, a cow, or even an ass, is "infinitely more pernicious, because allied to it "in being vitalised."

Yet arm-to-arm vaccination was practised by medical men for about a century; for nearly half a century it has been enforced upon the whole population by law, involving fine, dstraint, or imprisonment. The medical profession and the Government rigidly upheld the practice, but they are now compelled by force of circumstances to admit—what anti-vaccinators have affirmed all along—that arm-to-arm vaccination was dangerous, causing widespread disease, and often resulting in death. Now that they have condemned the practice, they recommend calf lymph, apparently forgetting or overlooking the fact that vaccination from the cow was tried, and rejected, by medical practitioners more than a century ago.

It is well known that thousands of cases of vaccinal injury are never revealed, owing to the dislike and dread of publicity, whilst in thousands

of others the awful secret of irremediable mischief is preserved in the bosom of the family. The cessation of all kinds of inoculation would undoubtedly instantly result in an upward leap in saving of life, reduced prevalence of various inoculable maladies, and an enormous sequential fall in mortality.

Amongst other tragedies committed under the authority of the Vaccination laws, and with the cognisance of the Local Government Board, is the vaccination of women in the lying-in wards of workhouses, within a few hours after parturition, and of infants born in those institutions soon after their birth. In the St. Pancras Workhouse, besides outrages of this character, it is recorded that a poor mother, seeking shelter there through stress of circumstances, had her three children (who were then in perfect health) separated from her, and vaccinated, without her knowledge or consent, the day after admission. Upon seeing them about a week later, they were so emaciated, and their arms inflamed, that she scarcely recognised them. The youngest child had previously been unsuccessfully vaccinated three times—at intervals of one month. The two youngest children caught measles, and died. At the inquest, on 16th November, 1888, the verdict stated that death was accelerated by vaccination, recently performed, and a rider was added protesting against the practice of vaccinating children in workhouses without the consent of their parents. These facts were verified by Mr. Alfred Milnes, M.A., F.S.S., and Mr. William Young. It is infamous that the

law permits, and that medical men can be found to commit, such enormities. I am sorry to be obliged to add that these and similar odious practices have been (and still are) of much more frequent occurrence than is generally surmised.

These and other indignities thoroughly justify the language of Professor Alfred Russel Wallace, who thus concluded a letter to the Secretary of the National Anti-Vaccination League ("Vaccination Inquirer," May, 1911, page 42):—"Our legislators should be told at every possible opportunity that, by permitting the Vaccination laws to continue on the statute books, they are responsible for the deterioration of the race, for untold agony, physical and mental, and for countless legalised though officially-concealed murders. We are far too mealy-mouthed about this matter. Plain speaking is needed to battle with the prejudices of officialdom and the vested interests of the medical profession. *'Lymph' is a false term.* It is diseased and disease-bearing matter, and should be called pus, and its wilful insertion into the skin of any human being should be called blood-poisoning, and denounced as a crime of the first magnitude. Thus only can we bring home to the average legislator his responsibility for the terrible consequences of his ignorance and his submission to a prejudiced and interested profession."

The most effective way to get rid of the disease and death-spreading enormities that are practised under the euphemism of vaccination or inoculation would be to pass an Act of Parliament

making all those who carry on those occult arts directly responsible for the effects of their operations.

Professor Crookshank, at pages 465 and 466 of Vol. I., "History and Pathology of Vaccination," said :—"Unfortunately, a belief in the efficacy of "vaccination has been so enforced in the education of the medical practitioner that it is hardly "probable that the futility of the practice will be "generally acknowledged in our generation, "though nothing would more redound to the "credit of the profession and give evidence of "the advance made in pathology and sanitary "science. It is more probable that when, by "means of notification and isolation, small-pox "is kept under control, vaccination will disappear "from practice, and will retain only an historical "interest."

Also, in a letter to the "Lancet," 24th May, 1890, he wrote :—"I maintain there is no scientific "support for vaccination, and the practice is "destined to fall into desuetude."

Dr. Charles Creighton, at pages 352, 353, and 354 of "Jenner and Vaccination," says :—"The "anti-vaccinists are those who have found some "motive for scrutinising the evidence, generally "the very human motive of vaccinal injuries or "fatalities in their own families or in those of "their neighbours. Whatever their motive, they "have scrutinised the evidence to some purpose ; "they have mastered nearly the whole case ; they "have knocked the bottom out of a grotesque "superstition. The public at large cannot believe

“that a great profession should have been so perseveringly in the wrong. . . . The profession, as a whole, has been committed before now to erroneous doctrines and injurious practices, which have been upheld by its solid authority for generations. . . . Vaccination differs, however, from all previous errors of the faculty, in being maintained as the law of the land on the warrant of medical authority. That is the reason why the blow to professional credit can hardly help being severe, and why the efforts to ward it off have been, and will continue to be, so ingenious.

“The longer the compulsory law is maintained, the more marked will the contrast become between public intelligence and professional dogma. As for the public, they may escape, as soon as they please, from being dragooned by an official authority which is neither very learned nor very liberal.”

When before the Royal Commission, Dr. Creighton said:—“In my opinion, vaccination affords no protection against small-pox.” (Question No. 5,430.)

The “New York Medical Tribune,” in 1881, expressed Dr. Creighton’s opinion in another way by declaring that:—“The propagation of disease, on the pretext of thereby arresting disease, is bad in logic, wicked in morals, and futile in practice.” The “Medical Tribune” proceeds to affirm that the testimony of the greatest authority in the world ought not to silence intelligent common sense, which is entitled

to respectful consideration, and that "there is no prelacy in science." That while "it is easy to deal in epithets, to call those insane who differ with us, no gentleman nor friend of truth and honourable dealing" would resort to this practice. That such men as Professor Newman, Professor Ennemoser, John Hunter, and Alexander von Humboldt are above such "blackguard logic." "That vaccine virus, being the product of animal decay," should not be infused "into healthy persons' blood. Vaccination is but a charlatan device, born of empiricism, and without a sound leg to stand on. Well-educated pathologists know this."

Unhappily the tenacity with which the medical fraternity cherish traditions of the past, and welcome new absurdities, is largely accountable for the sluggish advance of medicine. The experience of Mr. John Gadsby, a traveller and author, who sought a cure in sunnier climes, illustrates this, and does not stand alone. He writes, in "Gadsby's Wanderings":—"I consulted some of the most eminent medical men of the day . . . and was by them blistered, bled, cupped, and physicked, according to their respective fancies, until I was certainly too weak to bear any more; and then I was pronounced to be in a consumption. . . . One said my right lung was the worst, another my left; one recommended leeching, and another dry cupping; one counter irritants, and another emollients; one excitants, and another depressants; one stimulants, and another refrigerants; one acids, and another alkalies; one purgatives, and another astrin-

“gents; one tonics, and another sedatives; one blisters, and another cataplasms; with almost every other contradiction that their pharmacopœia contains; yet, like a lamb, I submitted to all that was prescribed without experiencing the slightest improvement in my health.”

Many of these reprehensible practices have been abandoned, although at one time universally performed by the faculty. One could heartily wish that they would shake off the remaining fetters which warp their judgment. Small-pox inoculation has been consigned to the limbo of obscurity, and the sooner vaccination follows the other fallacies which have been surrendered to more enlightened wisdom the earlier will the medical profession be able to bring their undoubted knowledge, without prejudice, to the aid and advancement of hygiene and sanitation. It is strange they should advocate a disease-diffusing practice which induces the most insanitary condition of the blood, if nothing worse. This practice, enforced as it is by a penal statute, makes it only possible for infant life to aspire to health through the polluting portals of artificial disease.

What a happy transformation would be secured if the profession would but realise that the simplest treatment and remedies are most effective in all diseases, and especially in a zymotic like small-pox. Miss Florence Nightingale, organiser of nursing in the Crimean War, and founder of the Nightingale Home for the Training of Nurses, in a letter to Mr. John Pickering, 31st March, 1871, wrote:—“Everyone who knows anything of public health questions will agree in your views as to

“the practical unity of epidemics, and their determining causes, and that exemption from all alike must be sought not by any one thing, such as vaccination, but by inquiring into and removing the causes of epidemic susceptibility generally.” And at page 8 of “Notes on Nursing” she says:—
“The very first canon of nursing—the first and last thing upon which a nurse’s attention must be fixed—the first essential to the patient, without which all the rest you can do for him is as nothing, with which I had almost said you may leave all the rest alone, is this—to keep the air he breathes as pure as the external air, without chilling him.”

Professor Alfred Russel Wallace was, therefore, quite warranted in writing in the chapter on “Vaccination, a Delusion : Its Penal Enforcement a Crime,” in his masterly work, “The Wonderful Century,” in which we read, at page 314 :—“The successive Vaccination Acts were passed by means of allegations which were wholly untrue, and promises which have all been unfulfilled. They stand alone in modern legislation as a gross interference with personal liberty and the sanctity of the home ; while as an attempt to cheat outraged nature, and to avoid a zymotic disease without getting rid of the foul conditions that produce or propagate it, the practice of vaccination is utterly opposed to the whole teaching of sanitary science, and is one of those terrible blunders which, in their far-reaching evil consequences, are worse than the greatest of crimes.”

PART XIII.

THE INOCULATION MANIA.

CHAPTER CV.

ANTI-TOXIN AND DIPHTHERIA.

INOCULATION and vaccination for small-pox have brought in their train a succession of inoculation theories. The practice has now become so widespread that it may veritably be described as a "mania." It is, therefore, only a natural corollary for this subject to be referred to here. Especially is this the case when these theories are utilised to bolster up the practice of vaccination.

From the time when Benjamin Jesty first performed vaccination in 1774—a discovery erroneously attributed to and appropriated by Jenner—there has been a frequent recurrence of alleged "discoveries" in the seratherapeutic world. Indeed, we have recently been informed, upon the supposed highest scientific authority, that it is in this direction we must look for

future triumphs of preventive medicine. A dismal, rather than a hopeful, outlook for humanity! Amongst the various ghastly failures of serotherapy which have obscured the true art of healing, none have been more prominently advertised than the now discredited canine inoculations by Pasteur for hydrophobia. Others of almost equal notoriety and fatality have been Koch's tuberculin serum for phthisis, Haffkine's and Yersin's sera for the plague; cholera virus; enteric (typhoid fever) serum, and anti-toxin serum (now so widely used) for diphtheria.

How many of the 13,000 preventable deaths in the Boer War were due to inoculations for enteric? It is well known that a potent cause of physical breakdown and failure in the field of large numbers in our army engaged in the late war in South Africa was the widespread inoculation for enteric. Dr. J. A. Jones, writing in the "British Medical Journal" in 1907, page 1767, states that in General Oku's vast army in the Russo-Japanese War, "there were less than 200 cases of enteric fever, and less than 400 of dysentery, and only 40 deaths," whereas in the Boer War "we lost more than 13,000 men from preventable disease alone." The "Insurance Spectator," of October, 1900, says:—"It is the fact that numbers of the rank and file have had their health utterly ruined as a direct result of the inoculation" (for enteric). What an enormous additional amount these inoculations must have added to the cost of the war, by disabling so many of our troops, when their services were most needed! The number of strong and healthy

young officers, going out on board our troopships, who fainted on being thus inoculated was extraordinary. Sir T. Lauder Brunton, M.D., says (Question No. 7,131, Royal Commission on Vivisection) that in certain cases, "instead of getting simple syncope, they got fatal syncope."

It is not my intention to refer to the incontrovertible evidence accumulating against these "cultures" in general, but to limit present observations to diphtheria. Now that the prevalence and fatality of diphtheria are attracting some attention, it may not be inopportune to review the teaching and statistics of the past, for the purpose of elucidating, as far as possible, the facts which relate to the treatment of this malady.

The majority of the medical profession—particularly since 1894—have pinned their faith to anti-toxic serum as a cure and a remedy, especially if applied at an early period of the disease. If the results were as beneficial as they are so boldly and unblushingly asserted to be, then I candidly admit it would be a thankless, difficult, and almost insuperable task to convince anyone, either of the inutility, the total failure, or the positive danger of the use of anti-toxin.

Before I conclude, I hope to prove all three of these contentions, and to show that since anti-toxin was introduced, where diphtheria has decreased, such decrease has not been due to anti-toxin, but is merely the continuation of a decline which had already set in prior to the invention of this new remedy, thus conforming

to a general law—already in operation before anti-toxin serum was known. In some places, this decline has been arrested; in others, diphtheria has not only largely increased, but has become more seriously fatal since the advent of anti-diphtheritic serum.

It is common knowledge that diphtheria and its fatality had not only decreased, but were declining in Europe long before 1894, the year of the introduction of the equine diphtheritic serum. This decrease of fatality was largely due to improving sanitary conditions; but the most important factor contributing to the ostensibly lessened fatality (if any), since anti-toxin came on the scene, is not due to anti-toxin, but to the inclusion of a large number of cases, principally children, simply suffering from “benign sore throat,” and not from diphtheria at all.

The treatment of diphtheria with anti-toxin serum rests its claim upon Löffler's hitherto unproved theory, that a certain bacillus is the active origin of the disease. But as this bacillus has often been found in the throats of numerous perfectly healthy persons; and, on the other hand, has been absent in a large percentage of diphtheritic cases; the evidence upon which the treatment is based is not only inconclusive, but contradictory. Whether the theory be based upon truly scientific principles or not, may, however, be disregarded for the present while we examine the actual results.

It will not be difficult to prove that the decline in the fatality of diphtheria is in no

way due to anti-toxin. The anti-toxin treatment of diphtheria became general in 1895, and has continued practically without abatement. Overwhelming evidences of its failure may be adduced, but I purpose citing a few instances only. Just as the decline in small-pox preceded the introduction of vaccination (see Farr on London "Vital Statistics"), so the decline in the fatality of diphtheria had set in years before the use of anti-toxin.

CHAPTER CVI.

CONTINENTAL AND AMERICAN EVIDENCE AGAINST ANTI-TOXIN.

PROFESSOR SOERENSEN says, in the "Practitioner," April, 1896, "that the serum did not, to any appreciable degree, prevent the extension of the disease to the larynx; all the severe cases died, and the good result in the lighter ones was attributable to the mild type of the epidemic." He also states that, at the Hospital of Bligdam, Copenhagen, "the mortality from diphtheria remains the same after, as it was before" seratherapy was introduced. Professor Rassowitz notices "that deaths from diphtheria have declined in Vienna where the serum is in general use, but he also remarks that they have *equally* decreased in Lower Austria, where the serum has not been employed."

Dr. Joseph Winters, Professor of Diseases of Children at New York University, has published a book on "Clinical Observations upon the Use of Anti-Toxin in Diphtheria," in which he exhaustively discusses the whole treatment and its results, and, referring to the statistics brought forward in favour of the anti-toxin treatment, says that "percentage of mortality is not only misleading, but is absolutely worthless unless accompanied by the actual number of cases reported and the actual number of deaths." He also declares that "the serum has an injurious effect, and will certainly be abandoned."

"In Baltimore, Philadelphia, Boston, and New York, the deaths from diphtheria show a decided increase, comparing the years before and after the use of anti-toxin," the mortality varying, according only to the gravity of the disease.

Dr. W. R. Hadwen, J.P., in his pamphlet on "The Anti-Toxin Treatment of Diphtheria: In Theory and Practice," states that at Berlin, in 1895, the fatality-rate from diphtheria was 15.7 per cent. The next year, 1896, the fatality-rate fell to 12.3 per cent. This decrease was forthwith hailed as a great triumph for anti-toxin. But, alas, for human credulity! Notwithstanding the use of the serum, the fatality-rate rose in regular progression until in 1900 it had reached 17.2 per cent.

Dr. Hadwen gives a list of towns where sudden decreases in the death-rate from diphtheria occurred prior to 1894—namely, Berlin, Berne, Brussels, Christiania, Leipzig, Lyons, and Rome. He also gives a list of towns where the maximum mortality was reached long before 1894—namely, Buda-Pesth, Buenos Ayres, Copenhagen, Geneva, Hamburg, Havre, Munich, Paris, Stuttgart, Toulouse, and Turin. He further gives the names of towns where the deaths from diphtheria have risen since 1894—Bucharest, Dublin, Liverpool, Stockholm, and others.

In St. Petersburg, there were 579 deaths from diphtheria in the three years 1892-94, before anti-toxin was introduced. Since the use of anti-toxin, these have increased to 1,276.

Dr. Stephen Smith, in "Fruitless Experiment,"

gives a list of authorities and places showing the increased number of diphtheria deaths since the advent of anti-toxin. Amongst these are Amsterdam, Basle, Boston, Brooklyn, New York, Prague, Potsdam, Trieste, and Vienna.

In Berlin, the records of the Charité Hospital show, since 1894, "an increase year by year in the mortality from diphtheria, as a result of the anti-toxin treatment, notwithstanding the fact that a large percentage of the cases had the disease in a mild form." The number of children treated for diphtheria has trebled since the application of serum.

As an example of the dangerous nature of the poison, Dr. Langerhaus, of Berlin, inoculated his boy, aged one year and nine months, with anti-toxin serum, as "a precautionary measure, a maid-servant having been sent to the hospital with symptoms of diphtheria." The "Times," of 12th April, 1896, states that "a few minutes after the operation, which the unfortunate father himself performed, the child, who was before in blooming health, was dead." "Dr. Langerhaus himself is, apparently, of opinion that the anti-toxin was the immediate cause of death." It would, indeed, be strange if he had thought otherwise.

Dr. De Maurans tells us, in the weekly bulletins of the Statistical Department of the City of Paris, that, in 1895, the diphtheritic fatality was only 9.42 per cent. in Paris. Six years later, when the anti-toxin treatment was in full swing, the fatality had risen to 14.49 per cent., thus showing an enormous increase.

CHAPTER CVII.

LONDON EVIDENCE AGAINST ANTI-TOXIN.

THE Metropolitan Asylums Board of London exercises its functions over probably the largest area and population, and deals with the largest number of cases, of any authority in the world. The authoritative official reports of this Board carry great weight, and may be regarded as conclusive. Especially is this the case when the evidence they afford is contrary to that which the compilers would have wished to present. The following figures are abstracted from the tables contained in the annual reports of the above Board from 1895 to 1910.

The most striking and dominant feature of the table is the high fatality-rate of those inoculated with anti-toxin when compared with the untreated cases. The highest fatality-rate of the injected patients is 28.1, and the lowest 9 per cent., whereas the highest fatality of the untreated cases is but 13.4, and the lowest only 1.5 per cent., showing a difference enormously against the use of anti-toxin.

The fatality of the treated cases is more than double that of those not treated with this dangerous concoction.

DIAGRAM E.

ILLUSTRATING TABLE 36.

LONDON.

DIPHTHERIA FATALITY OF CASES.

SHOWN IN FOUR-YEAR PERIODS, 1895-1910.

FATALITY PER CENT. OF CASES TREATED WITH ANTITOXIN, including mild cases and simple sore throat cases.

Average annual fatality,
13.28 per cent.

FATALITY PER CENT. OF CASES NOT TREATED, but including (137) 17 per cent. of moribund cases, and (92) 12 per cent. of diseases other than Diphtheria.

Average annual fatality,
5.65 per cent.
Deducting moribund cases and deaths from other diseases, only 3.9 per cent.

ANTITOXIN FATALITY.

NON-ANTITOXIN FATALITY.

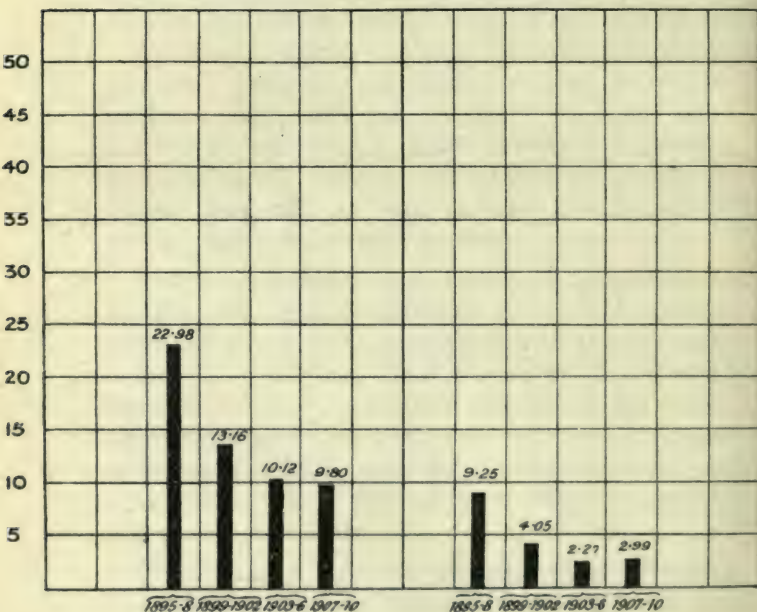


TABLE 36. (See Diagram E.)

METROPOLITAN ASYLUMS BOARD ANNUAL REPORTS.

Summaries of Anti-Toxin Treatment of Diphtheria from
Medical Supplements.

Year.	Cases Treated with Anti-Toxin.			Cases not so Treated.		
	Cases.	Deaths.	Mortality per cent.	Cases.	Deaths.	Mortality per cent.
1895	2,182	615	28·10	1,347	181	13·40
1896	2,764	717	25·90	1,411	154	10·90
1897	4,381	896	20·40	1,078	62	5·70
1898	5,186	906	17·50	1,186	84	7·00
1899	7,038	1,082	15·38	977	44	4·50
1900	7,271	936	12·88	954	51	5·30
1901	6,499	817	12·57	1,013	32	3·20
1902	6,015	714	11·80	824	27	3·20
1903	4,839	493	10·18	583	11	1·88
1904	4,070	444	10·91	569	20	3·51
1905	3,734	335	9·00	490	11	2·20
1906	4,149	432	10·40	788	12	1·50
1907	5,121	530	10·37	494	14	2·84
1908	4,583	498	10·87	664	9	1·35
1909	4,215	410	9·70	453	19	4·20
1910	3,263	270	8·27	304	11	3·60
Totals and Averages	75,310	10,095	13·28	13,135	742	5·65

Fatality of anti-toxin cases ██████████ 13.28 per cent.

Fatality of non-treated cases ██████ 5.65 per cent.

Relative Difference in favour of non-treated cases nearly
58 per cent.

Total cases, 88,445; total deaths, 10,837; fatality rate,
over all, 12.25 per cent.

It will be seen from the foregoing table that
75,310 cases of diphtheria were treated with anti-
toxin, with an average fatality-rate of 13.28 per

cent. ; and that 13,135 cases not so treated yielded an average fatality-rate of only 5.65 per cent.—a relative difference of nearly 58 per cent. in favour of the latter, and hence damaging to the claims made by the advocates of anti-toxin. But this is not all. From foot-notes to the tables in the reports, we find that of the 742 deaths in cases not treated, no fewer than 137 were moribund, and recovery hopeless on their admission to the hospitals, while there were at least 92 deaths from diseases other than diphtheria. This proves that low as was the average fatality-rate of the cases not treated with anti-toxin, it is also unfairly saddled with all the worst and absolutely hopeless cases. In addition, a number of deaths from other causes which ought in common fairness to have been excluded are actually included in the non-treated class, the elimination of which would have led to a further reduction of the non-treated fatality-rate.

It is, therefore, futile to contend that the group of cases treated with anti-toxin contained a larger proportion of severe cases. The tables all prove the very opposite.

If the 137 moribund cases are deducted from the 742 non-treated deaths, the fatality rate of this class is reduced to 4.66 per cent. ; and if the 92 deaths from other causes are also deducted, as they should in all fairness be, then the fatality-rate is reduced to only 3.9 per cent., against 13.28 per cent. for the serum-treated cases. Comparing relative percentages, this shows an advantage of over 70 per cent. in favour of the non-treated cases.

Now it is perfectly well known and established that the very essence of the treatment of diphtheria by anti-toxin is to secure the patients at the earliest moment—on the first day of infection if possible. It is argued that in the early stages of the disease, the diphtheritic poison is more amenable to the antidotal treatment by serum. Elaborate figures have been compiled by Dr. MacCombie (Medical Superintendent of the M.A.B. Brook Hospital) to show that in those injected with anti-toxin on the first day of infection, the fatality was nil; on the second day, it was 4.5 per cent.; on the third day, 11.9 per cent.; on the fourth day, 17.5 per cent.; and on the fifth day and after, it was 18.9 per cent.

On these figures one might argue, that the fatality is actually increased by the toxic poison, because in many of these cases the fatality is even higher than the average.

An attempt is made by the Medical Superintendents to explain away the condemnatory character of these facts. In their report for 1896, they say that:—"To compare the mortality of those treated with anti-toxin with that of those which during the same period were not so treated would be to institute a comparison between two groups, one of which contained a very large and the other a very small proportion of severe cases. . . . And we are consequently led to express our deliberate opinion that to compare the mortality of the anti-toxin treated cases with that of those which during the same period were not so treated, as has been sug-

"gested, would not only be misleading, but also "unfair."

In other words, we are asked to disregard the evidence, and to believe that this result is due to the anti-toxin virus being applied only to severe cases, while the mild ones are not treated at all!! A crushing answer to this assertion is supplied by the reports themselves.

We need but remember that the whole, or principal, benefit of the treatment is alleged to depend upon the prompt, or very early application of the remedy before it is even known whether the cases will prove to be mild or severe, then the weakness of these excuses becomes palpable.

I commend the foregoing facts to the thoughtful and intelligent consideration of all who desire to see the human race healthy, vigorous, and strong, both mentally and physically. The evils of zymotic maladies will never be successfully combated by adding disease to disease. In fresh air, sunlight, and hygienic conditions must preferably be sought the remedy, which so-called scientific research fails to provide. While the devotees of seratherapy cling so tenaciously to these artificial, but dangerous, cultures from the bacteriological laboratories, no benefit from the "science of medicine" is destined to accrue to the human race.

CHAPTER CVIII.

EVIDENCE FROM THE REGISTRAR-GENERAL AGAINST ANTI-TOXIN.

THE Registrar-General's sixtieth annual report, pages 72-79, shows that in 1878 the diphtheria death-rate for England and Wales, per million living (before anti-toxin), was only 140, whereas in 1897 (after anti-toxin treatment began) the death-rate increased to 246, being a rise of 106 per million living. A comparison between Leicester, London, and England and Wales is given in the following table, from which it will be seen that the death-rate from diphtheria almost doubled with the advent in 1894 of the serum treatment.

TABLE 37.

Table showing from 1868 to 1910, in quinquennial periods, the death-rate from Diphtheria, per million population, for Leicester, London, and England and Wales.

	1868- 72.	1873- 77.	1878- 82.	1883- 87.	1888- 92.	1893- 97.	1898- 1902.	1903- 07.	1908- 10. (3 years)
Leicester .	84	78	92	71	72	201	755	78	46
London .	111	116	170	230	353	594	342	154	129
England and Wales .	116	128	128	163	187	281	267	171	142

It will be seen that a great rise in the diphtheria mortality took place in the quinquennia 1893-97

and 1898-1902, not only in Leicester, but also in London, and all over the country. It may be asked why was it so very fatal in Leicester? As frequently happens, while more deaths occurred from diphtheria, there were fewer from other zymotic diseases, and these more than compensated for the increase from diphtheria. This is clearly seen from Table 43 (Appendix), which shows a great decrease in the death-rate per million from the seven principal zymotics in Leicester. In 1893-97, the death-rate was 2,997 per million; in 1898-1902, it was 2,831; in 1903-07, it fell to 1,654; and in 1908-10, it was only 1,153. The great rise was, therefore, a transfer of fatality from one zymotic to another, but this only more fully proves the uselessness of diphtheritic serum as a prophylactic.

The anti-toxin treatment was general in 1895, the middle year of the period 1893-97. The death-rate from diphtheria in Leicester declined from 80 per million in the quinquennium 1838-42 to only 34 per million in 1848-52. It increased to 84 per million in 1868-72, the period of high vaccination. In 1888-92, it had again gone down to 72 per million, but, with the introduction of anti-toxin, the death-rate was nearly trebled the next five years. Even in 1908-10, it was considerably more than the death-rate of 1848-52, so what benefit has Leicester gained from the use of anti-toxin?

London, with the use of anti-toxin, but in spite of all its sanitary advancement, has a higher death-rate from diphtheria by 18 per million in 1908-10 than it had in 1868-72.

England and Wales, notwithstanding the enormous strides made in the improvement of the public health, and the lessening death-rate, has a higher population death-rate from diphtheria by 26 per million in 1908-10 with anti-toxin than in 1868-72 without. Where, then, is the advantage derived from the use of this virus? It is of no avail to say the fatality of cases is less, as this is fully accounted for by the inclusion of many cases of ordinary "sore throat," under the nomenclature of diphtheria.

CHAPTER CIX.

LEICESTER'S EVIDENCE AGAINST ANTI-TOXIN.

THE statistics already furnished (collated from various sources) comprise a sweeping condemnation of the use of anti-toxin, but Leicester people will be anxious to know whether the results in their own borough coincide with the teaching of other towns and countries of the world. The evidence Leicester supplies is no less emphatic and conclusive as to the utter worthlessness of anti-toxin as a curative agent for diphtheria. Having prepared a number of statistics which have stood the test of a crucial examination before the Royal Commission on Vaccination, I am, fortunately, able to furnish the diphtheria figures for Leicester from the earliest complete year of registration—namely, 1838.

Table 38 shows the total and annual average number of deaths, with the annual average death-rate per million living. Side by side with the various periods, I have entered notes of events which may affect both the cases and the mortality.

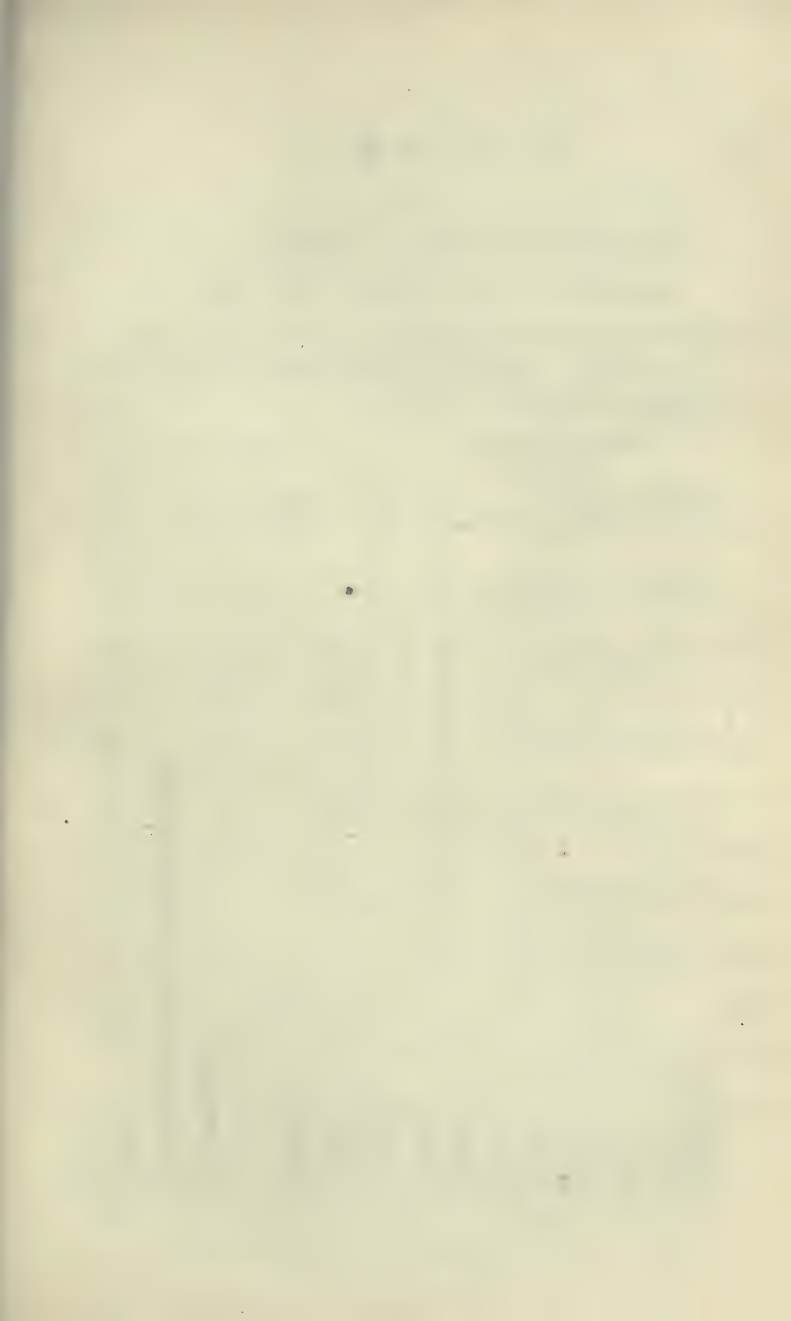


DIAGRAM F.

ILLUSTRATING TABLE 38.

LEICESTER—DIPHThERIA, 1838—1910.

AVERAGE ANNUAL MORTALITY per million population, in quinquennial periods, before and after the introduction and use of antitoxin in 1895.

BEFORE ANTITOXIN,
1838-1892.

Annual average cases 6'2.
Annual average death-rate, per million 6'5.

AFTER ANTITOXIN,
1893-1910.

Annual average . . . 61'0
Death-rate per million 29'4

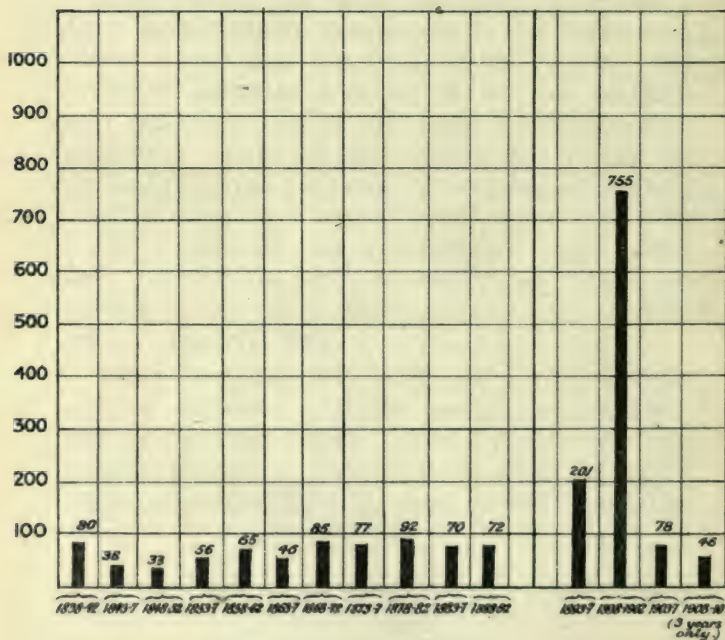


TABLE 38.

Table showing, for the BOROUGH OF LEICESTER, during the years 1838-1910, in quinquennial periods, the total number and annual average deaths from Diphtheria; with the annual average death-rate per million living. (See Diagram F.)

Quinquennial Period.	Total Number of Deaths.	Annual Average Deaths.	Annual Average Death-Rate per Million Living.	Notes.
1838-42	20	4.0	80	First complete year of registration, 1838.
1843-47	10	2.0	36	State - encouraged vaccination commenced, 1840.
1848-52	10	2.0	33	Sewers introduced into Leicester, 1851.
1853-57	18	3.6	56	Obligatory vaccination, 1853.
1858-62	22	4.4	65	
1863-67	18	3.6	46	
1868-72	39	7.8	85	Penal enforcement of vaccination.
1873-77	41	8.2	77	
1878-82	55	11.0	92	Sewer ventilation introduced, 1881.
1883-87	48	9.6	70	
1888-92	23	4.6	72	
1893-97	194	38.8	201	Anti-toxin introduced, 1895.
1898-02	785	157.0	755	Anti-toxin treatment more completely practised.
1903-07	89	17.8	78	Vaccination conscience clause of 1898 largely taken advantage of.
1908-10 (3 years only).	34	11.3	46	Full operation of vaccination exemption clause, 1907.

From 1838 to 1858, deaths registered as putrid and other sore throats have been tabulated as Diphtheria.—J. T. B.

This table shows that in the five years 1898-1902, when the serum treatment was in full swing, no fewer than 785 deaths occurred from diphtheria, being 452 more than took place during fifteen years previous to the introduction of anti-toxin, and 286 more than occurred during the preceding sixty years (three of which were not only anti-toxin years, but accounted for about one-third of the whole number of deaths in the sixty years).

The death-rate from diphtheria was only an annual average of 33 per million living in Leicester in the years 1848-52; and the highest death-rate in pre-anti-toxin years was 92 per million, in 1878-82. After the serum treatment commenced, the death-rate went up to an annual average of 755 for 1898-1902, being 663 per million higher than in any previously recorded period of years. The highest death-rate for a single year in pre-anti-toxin times was 192 per million, and the lowest nothing. Anti-toxin years give a death-rate of 1,514 per million for the highest, and 27 per million for the lowest. Who, therefore, will venture to affirm that Leicester people have obtained any benefit from the use of anti-toxin? Diphtheria had never been of very serious or fatal consequence in Leicester in the years preceding anti-toxin, but the number of cases and deaths went up by leaps and bounds when this virus was introduced.

We may now consider what is erroneously regarded by medical men as a supreme test of the value of anti-toxin—i.e., the case fatality. There are no authentic records of the number of diphtheria cases in Leicester before 1880, so the

case fatality-rate prior to that year cannot be ascertained. This is of no serious consequence, because comparatively few deaths were recorded before 1880 from this cause, the highest number in any one year being 11 in each of the years 1870 and 1879.

TABLE 39.

Table showing, for the BOROUGH OF LEICESTER, during the years 1880 to 1910, the annual number of notified cases of Diphtheria and deaths; with the fatality per cent., and the same arranged quinquennially; with the annual average percentage of fatality.

Year.	Cases.	Deaths.	Fatality per cent.	Total No. of Cases.	Total No. of Deaths.	Annual Average Fatality per cent.
1880	87	23	26·4	298	50	Prior to anti-toxin. 18·6
1881	63	11	17·4			
1882	38	5	13·1			
1883	26	6	23·0	338	54	Prior to anti-toxin. 16·1
1884	84	11	13·0			
1885	55	14	25·4			
1886	51	4	7·8			
1887	81	13	16·0			
1888	67	13	19·4	412	67	Prior to anti-toxin. 16·7
1889	84	10	11·9			
1890	75	11	14·6			
1891	65	14	21·5			
1892	67	10	14·9			
1893	139	20	14·4	1,598	447	Anti-toxin period. 32·8
1894	66	12	18·1			
1895	75	36	48·0			
1896	170	53	31·2			
1897	229	73	31·9			

650 LEICESTER'S EVIDENCE AGAINST ANTI-TOXIN.

TABLE 39.—Continued.

Year.	Cases.	Deaths.	Fatality per cent.	Total No. of Cases.	Total No. of Deaths.	Annual Average Fatality per cent.
1898	218	63	28·9	3,114	534	Anti-toxin period. 13·1
1899	906	222	24·9			
1900	1,452	316	21·8			
1901	1,034	155	15·0			
1902	320	29	9·1			
1903	211	28	13·3	929	78	Anti-toxin period. 8·4
1904	97	6	6·2			
1905	173	11	6·4			
1906	315	27	8·6			
1907	178	17	9·6			
1908	123	9	7·3	114	11	Anti-toxin period. 9·7
1909	140	14	10·0			
1910	114	11	9·7			

The above table gives the number of cases, the number of deaths, the case fatality, with the total number of cases and deaths in each quinquennium, and the annual average fatality-rate for each year, from 1880 to 1910 inclusive. It will be seen that a much larger number of deaths occurred in the anti-toxin periods, compared with the earlier ones, also that the case fatality for 1895-99 was about double that of the non-toxin years. Even when the case fatality was reduced to 13·1 from 1900 to 1904, what conceivable advantage could that be, when the cases were double any previously recorded number, and the deaths more than had ever been known?

The fallacy of giving case fatality as a test is more fully shown by taking fifteen years prior

to anti-toxin and fifteen years after the virus had been in vogue. These I place side by side :—

TABLE 40.
BEFORE AND AFTER THE USE OF ANTI-TOXIN.

Period.	Total Cases.	Total Deaths.	Average Annual		Annual Average Fatality of Cases per cent.
			Cases.	Deaths.	
1880-94, 15 years before anti-toxin.	1,048	171	69·8	11·4	17·1
1895-1909, 15 years anti-toxin period.	5,635	1,059	375·7	70·6	18·1

Here it will be seen that for the first fifteen years we had only 1,048 cases and 171 deaths, whereas in the second fifteen years, with all the increased advantages of sanitation, and up-to-date hospital accommodation, we had no less than 5,636 cases and 1,059 deaths.

In the first period, the cases were less than 70 per annum, while in the anti-toxin period they rose to nearly 376, an increase of over 500 per cent.

In the former period, the deaths from diphtheria averaged less than 12 each year, whilst in the anti-toxin period they reached over 70 per year, or the enormous increase of about 600 per cent.

The anti-toxin case fatality is not only higher than the pre-anti-toxin case fatality, but the actual number of deaths shows it was more than six times as deadly. In other words, for one death in pre-serum years, no less than six occurred under the "benign" influence of anti-toxin.

The fallacy of accepting case fatality as the one or only test of the supposed benefit of anti-toxin is further illustrated by Japan. The Serum Institute of Japan published a report, accompanied by a diagram, which was exhibited at the Japan-British Exhibition. Dr. M. R. Levektor has since published this diagram with the figures in "Inoculations and the Germ Theory of Disease," and it is from this I quote. In the seven years before anti-toxin, 1889-95, there were 30,039 cases and 16,571 deaths, or a case fatality-rate of 55.2. During the seven years after anti-toxin, 1896-1902, there were 112,588 cases, with 36,656 deaths, or a case fatality-rate of 32.6. Apparently there is an enormous saving by the reduction of the case fatality, but this is obtained by an increase of 82,549 cases and 20,085 deaths. In other words, since the introduction of anti-toxin in Japan, these deaths have more than doubled and the cases have nearly quadrupled !

Some day we may hope to end these atrocious inoculations, but it almost makes one despair, when we read such astounding statements as that made by the Lord Mayor of London, who, on opening the Old London Exhibition at the White-chapel Art Gallery, on 1st November, 1911, is reported to have said:—"London in the fourteenth century was most interesting to the present generation as a study. In those old days London had the Black Death, from which one out of every two died." It is very curious how London, which is reputed to have lost one out of every two of its citizens by Black Death—the other half by the Plague—was decimated every few

years by small-pox and a number of other epidemics, to say nothing of those who died a natural death, should have survived, and become the great and populous city as we know it to-day. It is a pity our public men do not acquire a more accurate knowledge of the history of our Empire city.

The facts I have enumerated prove beyond contradiction that anti-toxin does not cure diphtheria ; that the number of cases and deaths from diphtheria have enormously increased since the anti-toxin treatment was adopted ; that it is a dangerous poison, uncertain in action, and uncontrollable in its results ; that it frequently sets up the very fermentation it is alleged to cure ; and that it is a failure as fatal and gruesome as Professor Koch's tuberculin, which, after a fortune-making but mortiferous career, was kicked unceremoniously aside for something new, even by the renowned inventor himself.

A similar fate awaits the anti-toxin virus fraud, and the sooner it is overtaken by the Nemesis which is on its track, the better will it be for the health, happiness, and physical welfare of humanity.

Statistically, whether as a cure or a remedy, anti-toxin (like all other inoculations) has not a leg to stand upon. It follows in the wake of a long series of delusions, with equally disastrous results to long-suffering humanity. There have been inoculations for small-pox, the plague, tetanus, tuberculosis, typhoid, snake venom, pneumonia, syphilis, yellow fever, leprosy, hydro-

phobia, erysipelas, and I know not what, until we have almost reached that glorious time, fore-shadowed by Professor Tyndall, who fervently hoped and laboured for universal inoculation for all diseases. It must never be forgotten that incalculable pain, suffering, and cruelty to innumerable inoffensive animals is involved in every one of these inoculation experiments before they are ready to be offered to the public. Even then the text books which advertise these concoctions utter words of warning as to the danger of their use, and emphatically impress upon practitioners that "the old medicinal treatment should not be neglected." What further comment is needed!!!

CHAPTER CX.

WHAT IS ANTI-TOXIN?

WHAT is anti-toxin, and how is it obtained? Some suppose it is a natural, heaven-sent product. In the forty-sixth volume of the Transactions of the London Pathological Society is a paper by Mr. W. Robertson, M.R.C.V.S., wherein he describes how he inoculated a horse, bought for a few pounds, with diphtheritic matter. The animal was treated week by week till he became what is called "immune." Then he was bled fourteen times, about $17\frac{1}{2}$ pints of blood being taken from him on each occasion. As blood on cooling becomes, half of it, serum, it follows that from this horse was procured $122\frac{1}{2}$ pints, or $61\frac{1}{4}$ quarts, of serum. Naturally, "the youngest, freshest, and most valuable horses are not used for this purpose." He reports the case of a horse in which the initial dose of toxine "produced a violent local and general reaction," and a second dose a fortnight later "caused paralysis of the hind quarters, and the animal had to be destroyed."

From this it is evident that "like" *produces* "like," rather than, according to the foolish serum theory, "like" *cures* "like."

Dr. Bonnefin calculates that a horse, bled every

ten days, yields two quarts of serum, which can be sold at £12 per quart, producing an income of about £800 per year, before the animal dies either from bleeding or infection. This, however, is nothing compared with the injury done to patients and the community.

We find, then, that the process is to cultivate a portion of diphtheritic membrane, then to inject this poisonous matter into the blood stream of an animal ; and when a feverish condition results, the animal's blood is supposed to be in a diphtheritic condition. The blood is then drawn off—with horrible tortures to the poor animal, unless it is slain. The blood coagulates, and the supernatant straw-coloured fluid is called serum. This serum is supposed to contain the diphtheritic toxin, and is ready to be injected into the bodies of human beings supposed to be suffering from diphtheria.

Dr. Campbell Black, Professor of Physiology at Anderson's College, Glasgow, described anti-toxin as a filthy concoction of animal extracts, and said there was no finer advertisement for the modern medico-scientist than "to invent an anti-toxin from some animal abomination, and get it boomed as a cure for some new and grievous malady."

This serum has never yet been proved to be a specific ; indeed, the facts are the other way. It is a dangerous proceeding at any time to inject a morbid fluid of this character into a human body. Changes in such a fluid take place rapidly, and it frequently becomes a potent power for

evil, absolutely beyond control. It is administered on the happy-go-lucky, kill-or-cure principle.

Probably the worst feature of all is the wholesale diversion of true medical research from natural, into these unnatural, channels. Clinical studies are, in this way, abandoned for the more exciting and profitable incidents of the laboratory. How can this be remedied? The public have the solution of the problem in their own hands, and the best-class medical practitioners will be ranged alongside them, in refusing to have anything to do with these serum inoculations.

The pathological aspect of this question is regarded as hallowed ground; but even a "man in the street," as Mr. Balfour once observed, may sometimes possess knowledge equal to that of a Cabinet Minister. Although I lay no claim to special knowledge, nevertheless it is possible to collate the views of scientific minds. We are told that the "Löffler bacillus" is the cause of diphtheria. But is not the presence of the bacilli just as likely to be the effect as the cause. One thing is certain, the "Löffler bacillus" is found to be entirely absent in some cases of diphtheria, whilst it is present in other persons having no diphtheritic affection at all, and even in perfectly healthy persons.

To say nothing of the large number of cases wrongly diagnosed, who unfortunately become victims of the anti-toxin craze, by having diphtheritic virus directly injected into their blood, there are the further large number who suffer certain sequelæ as the result of this serum treatment.

The seriousness of these may, to some extent, be approximately estimated by the reports of the Metropolitan Asylums Board, for in the year 1895 there were 1,804 of these untoward cases connected with anti-toxin, and in 1896 there were 1,738, or a total in the two years of 3,542.

Dr. Washbourne, at a meeting of the Medical Society of London, on 9th October, 1899, pointed out that patients who died in spite of anti-toxin "treatment developed a certain train of symptoms suggestive of paralysis of the vagus nerve."—"British Medical Journal," 14th October, 1899.

In a series of experiments by Dr. Whitbridge Williams, in at least 75 per cent. of healthy persons the bacillus of typhoid, tetanus, diphtheria, and puerperal fever were found. The fact is, many of these minute creatures are "benign," and do not become "malign" until affected by the morbid poisons of these animal serums.

Miss Lind-af-Hageby, in "Fallacies and Failures of Serum-Therapy," from "The Anti-Vivisection Review," quotes many authorities condemnatory of anti-toxin, and cites a number of deaths occurring from its use. Many of the quotations are from "ardent advocates" of serum-therapy. Miss Lind gives some excerpts from "Serums, Vaccines, and Toxins," by Drs. W. C. Bosanquet and J. W. H. Eyre, which show that amongst other sequelæ from the use of serum are cyanosis, exudative tonsillitis, abscesses, cutaneous eruptions, erythema, urticaria, pyrexia, lockjaw, and other complications have occurred. Numerous instances of fatal injections of serum are given;

and the forenamed doctors remark (1909 edition):—
 “It cannot be denied that in a certain number of
 instances the injection of diphtherial anti-toxin
 has been followed by death directly attributable
 to the action of the serum.”

The observation of Dr. Hugo Magnus, in his
 “Superstition in Medicine,” may well conclude
 this chapter:—“There can be no doubt that
 absurd superstitions are still existent for which
 the twentieth century will be severely criticised
 in time to come.”

CHAPTER CXI.

TUBERCULIN AND TUBERCULOSIS.

HAVING shown how tuberculosis is spread by vaccination, it remains to consider the experiments on tuberculous patients by means of tuberculin now being so widely practised by members of the medical profession.

We already know, by painful experience, the devastation wrought upon the human race by the "Great White Plague"—consumption. The death-roll of this fell disease is said to be over 60,000 annually in England and Wales alone. If any specific can be found that will arrest its mortiferous ramifications, we ought to welcome it with outspread arms.

In 1890, Professor Koch, of Berlin, announced his discovery (?) of tuberculin, and, in common with all other kindred toxins and sera, the medical world forthwith hailed its appearance with enthusiasm. Those of us who have seen the disastrous results following vaccination, in the dissemination of tuberculosis, and other diseases, may reasonably hesitate to accept all that is claimed for tuberculin as a "cure."

Shortly after it was announced, test experiments were carried out in Berlin, but, unfortunately for both the discovery and the discoverer, from November, 1890, to February, 1891, the deaths

of no fewer than 123 selected cases were reported in the "Zoophilist," of 1st May, 1891 (page 18). After this, both Koch and his tuberculin fell under a cloud.

The "Old Tuberculin" has now been supplemented by the "New Tuberculin," or rather "Tuberculins," for whilst there were only two of the "Old," there are already eleven or more of the "New."

The "Lancet," Vol. I., 1908, pages 481 and 482, publishes "A Lecture on the Treatment of Tuberculosis by Different Kinds of Tuberculin," by Nathan Raw, M.D., M.R.C.P., Lond., F.R.S., Edin., from which the following excerpts are taken :—

"Working on the hypothesis that the human body is attacked by two varieties of tubercle, which may be present in the body at the same time, and which, generally speaking, are antagonistic to each other, I have devoted my attention within the last few months to the preparation of tuberculins for the treatment of these different lesions. After a fairly complete experience, I have come to the conclusion that Koch's tuberculin R. has little or no healing effect in phthisis pulmonalis, and when we remember that it is manufactured from human tubercle, if my theory is correct, it is exactly what we would expect."

Dr. Raw says he has, therefore, prepared a "special tuberculin," made from a "typical culture of perlsucht, . . . very carefully sterilised and standardised," which he thinks will get over the difficulty, and the results are to be published in

due course. Then he has tried a "tuberculin prepared from a pure culture of bovine tubercle," supplied by Professor Calmette, of Lille. These results are also to be published later on. He significantly adds:—"My tuberculin should only be used in early cases, and, if possible, in conjunction with open-air or sanatorium treatment."

He proceeds:—"With a view to produce immunity against human tubercle in children, especially in those who have been exposed to infection from a consumptive father or mother, I have lately been working with the serum of tuberculous cattle. I have purchased several dairy cows suffering from tuberculosis of the udder, and have obtained, with the kind co-operation of Professor H. E. Annett, a large amount of the serum of these cows. . . . I believe that the serum of a cow which has suffered from bovine tuberculosis will confer such immunity when injected into a child as will suffice to protect him against an attack of human tuberculosis. . . . In any case, the serum is quite harmless, and will only be used with the full consent of those parents whose children have been exposed to infection. . . . Many of us had experience of the tuberculin introduced to the profession by Professor Koch sixteen years ago. It was used in a great many cases of phthisis and other forms of tuberculosis without discrimination. . . . I well remember, after obtaining it with great difficulty, injecting several cases of lupus. The reaction was terrific, and from notes of one of my cases I find that the temperature ran up to 105 degs.,

"the pulse 140, whilst the inflammatory reaction on the lupus itself was most intense. The patient complained of a hot, parched, burning sensation all over his body; in fact, felt he was going to die. In the course of five days he developed acute tuberculous meningitis, and died within a week. . . . In four cases of phthisis in which I used it the patients were made rapidly worse; in fact, the effects were so serious that the remedy was very quickly dropped by the profession. We now know that the only fault of the tuberculin was its dosage. It was a powerful remedy, and too large a dose was administered without the slightest scientific knowledge as to its action."

This open confession, "without the slightest scientific knowledge," is an undeniable proof how human victims are used for experimental purposes.

At the International Congress on Tuberculosis, held at Washington, 1908, Professor Calmette stated that "his tuberculin C.L. was very well borne by tuberculous patients, and, whilst not curing tuberculosis any more than any other tuberculin, it evidently delayed the progress of the disease, and endowed the organism with resistance to the infection."—"British Medical Journal," Vol. II., 1908, page 1289.

In a paper on "The Great White Plague," by L. W. Andersen, printed in the "Sunday Herald," of 12th June, 1910, he asks:—"What possible virtue there can be in inserting a poisonous substance into the body of a person, which that person must at once eliminate or succumb?"

Mr. Andersen also quotes a resolution passed by the International Congress of Hygiene and Demography (Vital Statistics) at its Madrid sessions:—"Inasmuch as tuberculosis is easily "transmitted by vaccination when it is done "directly from the calf, we ask that in all nations "represented at this meeting the practice should "be adopted of using only the virus of calves "which have been examined *post-mortem* and "pronounced to be free from tuberculosis."

The failures of tuberculin are accumulating thick and fast, and the causes are not far to seek. The only satisfactory feature is, that the rival vendors of tuberculin are tending to destroy one another. The "mixture" itself is being diluted by glycerine and water, but while it is doubtful whether this is any improvement on the old "polygenous tubercle bacilli emulsion," there are many eminent and competent medical observers who look askance at the whole of this so-called "treatment." The numerous kinds of "lymph" which do duty for vaccination will soon be outnumbered by "tuberculin" preparations.

CHAPTER CXII.

THE "NEW" AND THE "OLD" TUBERCULINS.

THE following illuminating list is from "The Varieties of Tuberculin," in the "Lancet," Vol. I., 1908, page 802 :—"The preparations which are "best known in this country are—first, Koch's "old tuberculin, which is sometimes referred to as "tuberculinum Kochi ; secondly, Koch's new tuberculin, or tuberculin T.R. ; thirdly, bacillen-emulsion, or emulsion of bacilli ; fourthly, "pulverised tubercle bacilli ; and, lastly, the "recently-introduced Calmette's tuberculin-ophthalmic reagent. The old tuberculin is prepared "from four to six weeks old glycerine broth "cultures of tubercle bacilli, boiled for an hour, "evaporated down to one-tenth, and then filtered "so as to remove the bacilli themselves. The new "tuberculin, tuberculin T.R., is prepared by drying living virulent cultures *in vacuo*, grinding "them up into a very fine dust, and after extracting "certain soluble constituents with saline solution, "the residue is rubbed up with water to form an "emulsion. 'Bacillen-emulsion' is prepared from "pulverised bacilli, without previous extraction, "with water, equal parts of glycerine being added, "so that one cubic centimetre contains five milligrammes of bacillary substance. Pulverised "tubercle bacilli are used for making emulsions

"for opsonic and other tests. Calmette's reagent "is a solution in sterilised water of the precipitate "obtained from old tuberculin by alcohol, so as to "obtain a solution free from glycerine. Other "preparations which have been tried comprise "Kleb's tuberculocidin and antiphthisin, Hirsch- "felder's oxytuberculin, Hahn's tubercolplasmin, "Beraneck's tuberculin, Landmann's tubercolol, "Maragliano's water extract, and Denys's tuber- "culin B.F. (bouillon filtré), while Spengler "writes favourably of a filtered bouillon from "bovine bacilli described as P.T.O. (Perlsucht "tuberculin original)."

For those whom the preceding does not offer a sufficient choice, Dr. Landmann, at page 1044, "Lancet," Vol. I., 1909, tells us that:—"Recently "Koch has introduced a new tuberculin B.E. "(Bacillen-emulsion). Assuming that tuberculin "acts in the same way as the other vaccines, the "preparation B.E. should prove the most satis- "factory of all the tuberculins."

In the "British Medical Journal," 21st January, 1911, Vol. I., page 124, Dr. Cecil Bosanquet, writing on the preparation of tuberculin, says:—"The old tuberculin ('T.' or 'T.O.A.') is made by "growing the bacilli in a fluid medium, filtering "off the organisms themselves and concentrating "the filtrate to a small bulk. It thus contains "the poisons formed by the bacilli in their growth "on an artificial medium. It has been analysed, "but the essential toxic principle is still undeter- "mined.

"A peculiarity, indeed, of tuberculin is that it

"is not very toxic to healthy animals, whereas it
 "is rapidly fatal in minute amounts to those
 "which are infected with tuberculosis. It seems
 "that the essential poison of the disease is formed
 "by the interaction of two separate bodies. Its
 "action may be compared with the process which
 "has been called 'anaphylaxis.'"

With reference to the new tuberculin, Dr. Bosanquet writes:—"The second form of tuberculin (T.R.) is produced by grinding up the actual bodies of the bacteria, and dissolving or emulsifying them with water; it contains the poisonous substances present in the bacilli. Its action differs somewhat from that of the old tuberculin, and it is, therefore, different in composition. . . . We cannot say that we know anything definite about it."

This statement shows that as little is known about the "new" as the "old" tuberculin. In 1908 the "old" was being administered without "the slightest scientific knowledge," and "its essential toxic principle" was "still undetermined," while in 1911 nothing "definite" was known about the "new."

The danger of all this ignorant experimentation on human beings is illustrated by the following translation of an excerpt from Metchnikoff's "Immunity in Infectious Diseases," page 87:—"The serum of the blood of many animals will destroy the red corpuscles of a different species. This demonstration was afforded during the period when attempts were being made to transfuse the defibrinated blood of mammals,

"especially of the sheep into man. This practice
 "had to be abandoned in consequence of the *diffi-*
culties resulting from the solution of the human
 "red corpuscles."

This is a serious indictment by an unimpeachable authority, and one which ought to arrest the attention of the experimenters themselves as to the hazardous nature of tuberculin.

In the "Lancet," Vol. II., 1911, page 838, appears an article on "Dr. Carl Spengler's 'I.K.' Treatment for Tuberculosis," which contains the following:—"Since Professor Koch first introduced tuberculin for the treatment of tuberculosis, several modifications of that substance have been made and experimented with. Dr. Carl Spengler, whose researches on the subject are well known, has more recently made trial of a derivative of Koch's original tuberculin, which he has named 'I.K.,' which is a clear solution rendered durable by the addition of carbolic acid and sodium chloride solution. It has a twofold action—anti-toxic, which neutralises the poisons produced by the bacillus, and is, therefore, directly anti-febrile; and, secondly, a lytic or bactericidal action. Dr. Godfrey gives brief notes of the cases of eight patients whom he had treated by this remedy. His results are rather startling. . . . At the termination of the course of treatment, all the patients were either in 'perfect health,' 'perfectly well,' or 'quite as well as usual,' and one had been 'medically examined for insurance and accepted.' He does not say whether 'I.K.' had been tried in other of his cases with less wonderful pro-

"gress. We are moved, however, to point out "that this preparation has been tried by competent "observers, who have entirely failed to obtain the "results claimed by Dr. Spengler and Dr. Godfrey."

The article refers to Dr. Spengler being presented by his admirers, on his fiftieth birthday, with a complete set of his works, which are curiously described as "a valuable addition to the present knowledge of tuberculosis and syphilis, though we ask our readers to receive the results of employing 'I.K.' with reserve for the present." This conclusion is certainly rather disconcerting, and not over-complimentary to Dr. Spengler, but it throws a flood of light upon the hazardous and contradictory nature of the experiments that are being carried on by pseudo-medical scientists at the expense of suffering and credulous humanity.

In a letter to the "Times," of 11th October, 1911, Colonel Alfred S. Jones, M.Inst.C.E., commenting on a paragraph which had previously appeared under the heading, "The War Office and Bovine Tuberculosis," referred to the tuberculin test, and as to whether it could "be depended upon to give results of value to the fight against tuberculosis in the human subject," alluded to the tests "applied to the magnificent herd of King Edward VII., nearly all of which reacted," and said that the experiments of the Reading Corporation showed that "animals which had not reacted to the tuberculin test applied within a month of slaughter have shown extensive tubercular lesions."

Replying, in the "Times," to this letter, with a view of rehabilitating tuberculin, Dr. J. Hopkins

Walters, Consulting Surgeon to the Royal Berkshire Hospital, and member of the Sanitary Committee of the Reading Corporation, says that the tuberculin test when applied to cattle is, in skilled and experienced hands, "absolutely trustworthy," but his statements do not seem to uphold his assertion, for he says that:—"A cow that has once shown reaction may, through the application of the test, become immune from reaction to further tests and yet be infected by tubercle. Again, some cows that are tuberculous fail to respond to the test. . . . Also that where 'the reactors often prove sound in every organ of their bodies on slaughter,' only means that they have not developed lesions so coarse as to be visible to mere ocular inspection. But the bacilli are there, notwithstanding. The microscope shows them. . . . Ordinary inspection is not always sufficient, and when insufficient the results are dangerous."

This all proves the utter uncertainty of the "tuberculin" test.

CHAPTER CXIII.

TUBERCULIN TREATMENT.

ONE of the latest works published at the time of writing is that on "Tuberculin Treatment," by Drs. Clive Riviere and Egbert Morland, 1912. Their introduction starts thus:—"Tuberculin has "had a strange and eventful history, but nowhere "so strange as in England. Entrusted by Robert "Koch in 1890 to a small band of clinical "workers, who returned from Berlin with the "precious remedy, it was tested by them in the "large increasing doses then in vogue—tested and "found, not indeed altogether wanting, but not "fulfilling the expectations which had been based "upon it, and after a trial of but a few months, "discarded again as a remedy whose action was "'to promote the formation of cavities, to lead "'to extension of the disease,' 'to exhaust the "'patient, and to cause loss of weight and "'strength.'" (Page 11.)

The desire of the writers, as expressed by themselves, is to clear away all differences and difficulties of treatment, and to provide a *vademecum* which is to be the "guide, philosopher, and friend" of the medical profession on this subject. They say:—"The study of tuberculin "treatment has hitherto been rendered difficult "by the lack of a text-book bringing both

"methods thus objectively before the reader. This has been the chief hindrance to the appreciation of tuberculin at its proper value, not indeed as a panacea for all the baleful effects of Koch's bacillus, but as a specific remedy capable, if properly used, of doing good in most manifestations of tubercular disease. . . . The confusion arising from the number and variety of preparations of tuberculin on the market; the mental difficulty of grasping the dosage in its various guises—these fears the writers hope to allay and the difficulties to simplify. But the chief and central aim of their book is to take tuberculin treatment out of the field of doubt and controversy, and to place its principles and practice alike on a firm basis." (Page 15.)

How far these two medical gentlemen have accomplished the object with which they set out may be gathered from what they term "results." They say:—"The writers have decided to give no statistics of the results of tuberculin treatment in phthisical patients. This self-denying ordinance has been dictated by several considerations. In the first place, it has been done recently and well by Latham and Inman. In the second, statistics of cure are of very questionable value in a disease such as phthisis, in which there is so strong a tendency to spontaneous arrest, and in which even the necessity for any sort of treatment is difficult to assess. And in the third place, there are certain available statistics of a different but more convincing character. . . ." (Page 167.)

Now, if their work was to settle the question decisively, and establish it on a firm basis, surely every available source of strength should have been tabulated. The omission is, of itself, ominous. They proceed to buttress up the tottering structure thus:—"But statistics apart, certain results may be said to be well established by clinical experience. The first and most striking of these is that phthisis treated with tuberculin before it has become open—i.e., before it has been exposed to the risk of secondary infection—remains closed. The importance of this fact, on which there is practically unanimous opinion, can hardly be exaggerated. It is true that the same result has been claimed for hygienic treatment. Bandelier regards the fact as being so well established that he refrains from giving tuberculin to these patients because it is unnecessary. It is also true that the *vis medicatrix naturæ* unfettered by art would have had the same result in a large proportion of cases—the Paris Morgue (quoted by Huggard) gives 68 per cent. of cures without the bias of any pet remedy—but there remains a proportion, it may be small, of closed pulmonary tuberculosis which will not get well, and with these tuberculin has been shown to be competent to deal. Early diagnosis—that is to say, *really* early diagnosis, before tubercle bacilli appear in the sputum—combined with specific treatment, ensures completely against a break-down. . . ." (Pages 168 and 169.)

There is nothing very decisive or definite in a "treatment" by "tuberculin" which is run so

very close both by "hygienic" and *vis medicatrix naturæ*. If these can cure 68 per cent. of the cases, and there is only a "small" proportion left for "tuberculin" treatment, and even these must be secured "really early" before symptomatic evidence of the disease, there is a complete breakdown of the case for tuberculin. Under these circumstances, were it not so serious, it would be almost amusing to read the final clause:—

"Of all these matters the tubercular patient is the final judge, and misled as he was by the disasters of 1890-91, there is no doubt that his experience of tuberculin under the new conditions is making him willing, and sometimes even anxious, to submit himself to treatment with the remedy." (Page 169.) If the unfortunate patient happens to be killed by the experiment, who is to deliver judgment? This book, which was to establish the "principles and practice of tuberculin alike on a firm basis," leaves the question even more undecided than before.

CHAPTER CXIV.

TUBERCULIN DISPENSARIES.

WHEN presiding over the proceedings of the Preventive Medicine Section at the Congress of the Royal Institute of Public Health, held at Exeter on 25th August, 1902, Sir Henry Littlejohn (Edinburgh) struck the right note when, in closing a discussion on the question of compulsory notification of phthisis, he said (according to a report in the "Times" of the following day) "he had never seen a cure of consumption in a labouring man. He emphasised the importance of the results obtained in the diminution of consumption by ordinary sanitary reform. In order to cope with the disease, more should be learnt about it and its habits."

It is lamentable to think that, instead of development on the sure lines of ordinary sanitary reform, tuberculin dispensaries are being established all over the country. They are, in reality, "tuberculous" dispensaries, but the sooner they are dispensed with altogether, the better both for the unfortunate victims who attend them and for the health of the population at large. Medical opinion is by no means unanimous as to the benefit of these institutions, and, even if it was, that would be no reason why they should be established. The whole question of "tuberculin" treatment is in the region of ambiguity and doubt.

Dr. Halliday Sutherland, writing from the St. Marylebone Dispensary for the Prevention of Consumption, to the "British Medical Journal," of 16th September, 1911, says:—"Sir Clifford Allbutt, Sir Lauder Brunton, Sir William Osler, and Dr. Arthur Latham have condemned the claims of tuberculin dispensaries on two grounds—that the results are obtained in early cases of Stages 1 and 2, and that the diagnosis is unreliable. At these dispensaries the tuberculin reaction is regarded as specific. Clinically, as anyone can prove for himself, it is present in typhoid fever, diphtheria, syphilis, pneumonia, and measles. Again, Arloing, whose experiments extended from 1882 up to his death a few weeks ago, demonstrated that a healthy guinea-pig will not react to tuberculin, but that a guinea-pig inoculated with the toxins of the typhoid bacillus will give a typical reaction. We also know that 70 per cent. of the men in a German cavalry regiment reacted to tuberculin. . . .

"It is exactly because it is unjustifiable and strongly to be deprecated that cases in Class 1 should be described to the general public as cases of consumption. At these institutions all the above cases would give a reaction, receive a course of treatment, and no doubt add to the list of 'cures.'"

Dr. Klein, referring to tubercle bacillus, at page 351 of "Micro-Organisms and Disease," says:—"Koch and many other observers have shown that both in scrofula and lupus tubercle bacilli occur, and that with both these materials general tuberculosis can be induced in guinea pigs. But

“since these two diseases are, in the human subject, well-marked disorders, distinct from pulmonary tuberculosis, it is necessary to assume that the tubercle bacilli in the three diseases possess some functional differences. To say that lupus is a form of tuberculosis of the skin does not cover the facts, since real tuberculosis of the skin does occur, and is totally different from lupus; so also scrofula is not merely tuberculosis localised in the cervical lymph glands, since in many instances it does not lead to pulmonary and general tuberculosis, whereas the true tuberculosis of lymph glands does so.”

These words of Dr. Klein are worthy of the earnest attention of those in the tuberculin cult. Dr. Klein also considers that the tubercle bacillus is “aerobic” (“Micro-Organisms and Diseases,” page 90), while Dr. H. V. Knaggs classes it as “anoerobic” (“Microbe—Friend and Foe,” page 64). Dr. G. G. Bantock, M.D., and Dr. C. K. Millard seem to favour the theory that in many cases of consumption the disease precedes the appearance of the bacillus. So that nothing is specific, excepting the dominant feature of uncertainty.

The foregoing is sufficient of itself to prove that these institutions are working on erroneous and unreliable lines, that they will accomplish nothing good, and after the expenditure of huge sums of money will end in failure.

CHAPTER CXV.

THE "BRITISH MEDICAL JOURNAL" AND TUBERCULIN.

THE "British Medical Journal," of 6th July, 1912, contains an article, at page 35, on "Tuberculin Treatment," from which the following excerpts are taken :—

"The gradual re-entry of tuberculin into the therapeutic field has called forth a number of guides, of all nations, who desire to point out the way of safety, and the pitfalls of danger, to all those who seek to employ it."

"Tuberculin treatment has at more than one period been taken up too enthusiastically and dropped too abruptly, and even now there is a manifest tendency in some quarters to vaunt its powers to a far greater extent than the collected evidence of good observers would seem to warrant. By slow degrees a better knowledge of its mode of action has been attained, but at best this knowledge is still limited within narrow bounds; and much of the theory which serves to guide our lines of thought is speculative."

Referring to Dr. Sézary's experience, the writer says :—"The immunity afforded by one strain of tuberculin does not hold good when another strain is introduced, a new process of immunisa-

"tion having to be set up in each case. Immunity
"so produced does not prevent the development
"of the tuberculous poison itself if introduced
"artificially. . . .

"The experience of observers with regard to
"the use of injections during periods of tuber-
"culous activity and fever differs widely. . . .
"The early case and the chronic consumptive in
"whose lung the process is quiescent have been
"found to benefit greatly, but there is abundant
"evidence to prove that harm rather than good is
"liable to follow its indiscriminate use in other
"stages."

After noticing two inquiries recently made by medical journals—the "Medical Klinik," No. 1, 1910, in Germany, and the "Hospital Stidende," No. 4, 1912, in Denmark—the "British Medical Journal," referring to Saugman's Sanatorium, says:—"The results obtained by tuberculin were
"sometimes astonishingly good; sometimes it was
"apparently quite inactive; and in several cases
"its use was followed by complications, such as
"pleurisy, hæmorrhage from the lungs and
"intestines, and aggravation of pulmonary, laryn-
"geal, and intestinal tuberculosis. Many prepara-
"tions of tuberculin were in use, including Koch's
"tuberculin (old and new), bacillary emulsion,
"endotin, tuberal, and Denys's tuberculin. The
"question whether tuberculin is suitable for
"ambulant treatment is answered in the negative
"with no uncertain voice, and the tale of acci-
"dents, which even treatment within the walls of
"a sanatorium has not been able to avert, is held
"to indicate that this treatment should be limited

"to institutions where its every phase may be
"under close scrutiny and control."

The article thus concludes:—"The report, taken
"as a whole, gives the impression that tuberculin
"is a two-edged sword, the wielding of which in
"untrained hands must be followed, sooner or
"later, by incidents disastrous to the patient and
"damnatory to the good name of the physician
"and the remedy. On the other hand, employed
"by those whose respect for its potency is
"considerable, tuberculin may effect wonders
"astonishing even to the physician."

No further evidence is needed as to the
dangerous character of the use of tuberculin.
Who is to know whether the "two-edged sword"
is being wielded by "untrained hands" or other-
wise until proved by the fatal and irremediable
result?

CHAPTER CXVI.

THE ROYAL COMMISSION ON TUBERCULOSIS.

WE have seen that these experts have, on their own showing, administered the serum "without the slightest scientific knowledge as to its action," and that they do not "know anything definite about it." They appear to feel no compunction for all this wicked and haphazard experimentation on human beings. Why do they not carry out control tests of a really effective nature?

If they have any confidence in their so-called remedies, and really wish to arrive at scientific truth, the whole value of anti-toxin, tuberculin, and all other serums and vaccines, could be easily proved within the space of twelve months by the starting of two institutions, exactly parallel in conditions, equipment, and other respects, with the single exception of serum being used in one, but not the other; the whole to be carried out under the supervision of a committee of practitioners and laymen. Does the fear of the downfall and disgrace, and the consequent loss of prestige, prevent this being done? There is not the slightest doubt what the result would be. The non-inoculation institution would yield the best records by far, just as the diphtheria statistics of the Metropolitan Asylums Board prove that the cases not treated with anti-toxin have an enor-

mously lower death-rate than those that are treated with the serum.

In view of the proposals of the National Insurance Bill, it is impossible to leave this subject without referring to the Reports of the Royal Commission on Tuberculosis. Mr. J. H. Levy has most ably dealt with this subject under the heading, "The Government and Medical Research," in the columns of the "Individualist," for September-October, 1911, pages 61-3, from which I quote :—

By the second section of Clause 15 of the National Insurance Bill, it is enacted that 1d. per annum is to be paid, out of the monies voted by Parliament, in respect of each insured person, towards defraying the expenses of sanatorium treatment; but . . . the Insurance Commissioners may retain the whole or part of this money for the purposes of research. It is estimated that . . . a sum of about £62,500 is placed at the disposal of the Commissioners for research purposes, wholly or in part, if they choose to divert it from the maintenance of sanatoria.

What is this research work to be? Is it to be such an inquiry into the causes of consumption, or the conditions under which it is generated and spread? . . . Is it to be a search for the means by which consumption can be prevented—a search for methods and conditions of treatment which build up the vital energies of the individual, and increase the organic resistance to disease in both animals and human beings? Or is research to mean the generation and spread of consumption throughout the animal world, including man, by expedients which lower the vitality and decrease the power to withstand disease—which, indeed, weaken the tenacity of life, and thus predispose to disease?

. . . The Commission was appointed in August, 1901, to "inquire and report with respect to tuberculosis :—(1)

Whether the disease in animals and man is one and the same; (2) whether animals and man can be reciprocally infected with it; (3) under what conditions, if at all, the transmission of the disease from animals to man takes place, and what are the circumstances favourable or unfavourable to such transmission."

The Royal Commissioners in their First Interim Report, May, 1904, tell us that their inquiry has consisted in "conducting experimental investigations" of their own. Their work has been entirely on the lines of the ordinary vivisectional "research," with experiments of the most disgustingly cruel kind, such as the feeding of animals with faecal matter, with sputum and diseased parts of consumptive and tuberculous people and animals. . . . In other experiments conducted by the Commissioners, this poisonous matter was injected or inoculated directly under the skin or into the abdominal cavity. The result was, of course, that the noxious filth thus introduced into the cattle "gave rise at once to acute tuberculosis," or widespread disease of the lungs, spleen, liver, lymphatic glands, etc. . . . In some instances "the disease was of remarkable severity." More than two hundred cattle were used in these first experiments.

A Second Interim Report was presented in January, 1907. In this we have the narration of many more of these vile experiments on cattle, pigs, goats, guinea-pigs, monkeys, rabbits, rats, mice, hedgehogs, mongooses, cats, and dogs. The Third Interim Report, presented in January, 1909, gives details of similar cruel inoculation and feeding experiments, conducted by these Royal Commissioners with means towards which all of us were forced to contribute.

The Final Report was presented this year. It shows that horses and birds have also been victims of these experiments. The Commissioners point out that the conclusions arrived at are based solely on their own researches. It is almost needless to say that they are irreconcilable with those arrived at by other investigators. Indeed, the contradictory nature of the results obtained by vivisectional experiments is, no doubt, largely

684 THE ROYAL COMMISSION ON TUBERCULOSIS.

responsible for the proposal to devote a further sum to research in connection with consumption.

. . . The Commissioners thought it desirable to make use chiefly of Jersey cattle, because these are "remarkably free from tuberculosis." They did not, however, . . . inquire why Jersey cattle have this immunity. On the contrary, having obtained these beautiful and healthy animals, the inquisitors at once set about the destruction of their immunity from disease by "testing" them with tuberculin—that is, by inoculating them with poisonous matter. . . .

But Mr. Stewart Stockman, M.R.C.V.S., Chief Veterinary Officer of the Board of Agriculture and Fisheries, told the Royal Commission on Vivisection that cows in the very advanced stages of tuberculosis may not react to tuberculin if their temperature is already high. (Q. 3,174.) And the Tuberculosis Commissioners themselves state, in their Second Interim Report, that "in some instances marked reactions were obtained after the tuberculin had been injected into monkeys in which no tuberculous disease was found on subsequent post-mortem examinations, and, on the contrary, a reaction occasionally failed to appear in animals which were subsequently found to be extensively affected."

The cruelty of these experiments is shown by the results which the Commissioners have recorded. For example, we are told that "in some cases the effects of the injection of the bacillus are very severe. . . . The animal (cow) becomes ill. It loses flesh, respiratory troubles often make their appearance, and within a period varying from about twenty to fifty days the animal dies, or is so ill that it has to be killed. . . .

In concluding their report, the Commissioners urge that food regulations be so "planned so as to afford better security against the infection of human beings through the medium of articles of diet derived from tuberculosis animals." They also recommend "that such measures should include the exclusion from the food supply of the milk of the recognisably tuberculosis cow."

Now that human beings should avoid taking as food the flesh or milk of tuberculosis animals, is a proposition which needs no vivisectional experiments for its establishment; and that persons may rightly be held responsible at law for the sale of such articles of food, which is really a fraud of a very serious kind on their purchasers, needs no torture of animals for its demonstration. The loathsome cruelty of these Royal Commissioners is not only wicked in the extreme; it is a stupid work of supererogation. But, in reality, behind the three questions which this Commission was asked to solve is another of more fundamental importance: How comes it that these animals are diseased? How did the disease originate in them? Let those who would answer this bear in mind the concluding words of Mr. Levy's essay, "The Passover and Vivisection" ("Politics and Disease," pp. 53-70):—"I believe that future investigations in the field of pathology will show that not a few of the diseases which plague mankind are the natural fruit of the ill-treatment of our 'poor relations,' human and sub-human."

The proceedings of this Commission appear to have been even worse than those of the Royal Commission on Vaccination, and were not only a travesty of the serious and important duties committed to them, but also of common sense, and an outrage on the ordinary principles of humanitarianism.

CHAPTER CXVII.

"ANAPHYLAXIS"!!!

THIS part of my work would be incomplete without a word on "Anaphylaxis."

In a pamphlet on "Serum Therapy, with Notes on the Preparation of Serums," issued by a firm of serum purveyors (Messrs. Parke, Davis & Co., London) to "The Medical Profession," a lurid light is thrown upon the "inner workings" of this lucrative, but disease-distributing, business. After describing the process of "manufacture," it is stated that when, by repeated injections of diphtheria virus, a horse has been sufficiently "immunised," the "blood is withdrawn . . . by means of a sterilised cannula inserted into the jugular vein, once a month usually, and on each occasion a gallon of blood may be removed." At the selling price of about £12 per quart, this business might well arouse the envy of the gold magnates of South Africa.

The diphtheritic serum "prepared" and sold by this particular firm of vendors is puffed up as "a proved success," in contrast with other serums which they say "have so far not proved satisfactory." Then, as a warning to purchase only where great precautions are taken to secure "purity" of the serum, it is said that:—"On one occasion, in the city of St. Louis, serum was

"injected into a number of children, of whom twelve contracted tetanus and died."

The case fatalities from the reports of the Metropolitan Asylums Board are adduced to show the advantage of using the serum ; but, as I have shown, these are overwhelmingly against the use of anti-toxin for diphtheria. After all this "puffing," it is somewhat surprising and disconcerting to find a paragraph of the pamphlet devoted to the "Ill Effects of Serum Administration," wherein we read :—

"The occurrence of serum disease or of anaphylaxis (both of which are reactions of the system excited by the introduction of a foreign proteid substance) is more frequently reported in connection with the prophylactic administration of serum than with its use as a curative agent," and that "it is the serum and not the anti-toxin which is the disturbing element." This is a curious observation. Why should not both have a disturbing effect?

These are very serious and condemnatory admissions, but there are worse to follow. The "serum disease" thus injected may give rise to "any or all of the following symptoms :—Urticaria, itching, pyrexia, enlarged lymph nodes, pain in the joints, oedema, albuminuria, etc."

This is sufficiently startling, but even still graver statements follow. We, or rather medical men, are told that "anaphylaxis may occur upon a second injection of serum, and may occur even though years have elapsed since the first." A leading article in the "British Medical Journal," of 21st

May, 1910, is quoted, wherein the writer remarks, that whilst the exact scope of anaphylaxis is not clearly known, it is certain that rapid or sudden death may occur after a serum injection, and that should a second injection be given, the case must be carefully watched. The article proceeds:—"Anaphylaxis first shows itself ten or fifteen days after the first serum injection, but may be elicited by any injection given subsequently, and may persist for, at any rate, as long as nine years in specially-sensitive patients."

What a terrible prospect this opens to view. It is marvellous that any self-respecting practitioner can be found to countenance and use these filthy and dangerous serums. If their advocacy was not "protected" by its enshrinement in the hands of a legalised profession, the whole of the serum-mongers would be pronounced unfit to remain outside a "mental hospital." We are further informed that:—"It has been found that the serum obtainable from the blood of a horse immunised against one species of streptococcus does not necessarily counteract some other variety; therefore, in the absence of knowledge as to the specific organism to be combated, it is essential to employ a serum elaborated after the injection of as many strains of streptococci as possible."

So that there is to be a general intermingling of these disease serums, and, according to the showing of these experts, an individual may be "immunised" against one disease, and through the very "immunising" process become a victim of several other maladies, each in their turn by a similar

process to give rise to others. If this sort of thing continues to be foisted on the public, as the outcome and *ultima thule* of medical science, we shall perforce begin to think that Sir John Forbes, M.D., Physician to the late Queen, was not very far wrong when, after fifty years of a busy practice, he wrote "Nature and Art in the Cure of Disease," and declared in his summary that "It would have been better for the world if it had never seen a medical man."

In an article, "On Some Points Connected with the Serum Treatment of Diphtheria," by E. W. Goodall, M.D., Lond. (Medical Superintendent of the Eastern Fever Hospital, Homerton, N.E.), which appeared in the "British Medical Journal" of 11th February, 1911, the writer believes that diphtheria serum is a "specific"—a fact which renders his admissions all the more significant. He refers to symptoms in a certain number of the patients "of such a nature as very rarely indeed "occurred in diphtheria cases not treated with "serum. It soon became clear that these symptoms "were due to the serum. . . . The symptoms "are fever and a rash, usually urticaria or a "variety of erythema multi-forme. These symp- "toms occur in about 33 per cent. of the cases "treated. But, besides them, other and much "more unpleasant symptoms were observed, though "less frequently, in 3 or 4 per cent. of the cases— "namely, acute pains in joints, tendons, and "fasciæ, with fever. Occasionally the joints were "swollen. There was, in fact, arthritis. In such "cases the symptoms bear some resemblance to an "attack of rheumatic fever." He says:—"Our

"knowledge of the serum sickness is almost entirely derived from the use of horse serum. But it is known that the serum of other animals will give rise, more or less markedly, to the same effects."

Altogether, about 200 cases are mentioned, and out of 30 cases collected by a Dr. Gillette, 16 were fatal. I select one case only, not on account of the exceptional character of the symptoms, but on account of the eminent position occupied by the sufferer—namely, Mr. (later on, Sir) Richard Thorne Thorne, Medical Officer of the Local Government Board. Dr. Thorne's own vividly descriptive words are:—

"I suffered from a mild attack of diphtheria in 1889, followed by a troublesome paralysis, and hence I have since, on three different occasions, injected myself with a prophylactic dose of the serum (1,000 units) when attending cases of diphtheria in which I have been more than usually exposed to a virulent infection. My first injection was in December, 1902, after which I suffered from a slight urticarial rash round the seat of injection. My second was in September, 1904. This was followed by a more general rash, and some malaise. My last injection was in November, 1907. Two days after the injection I felt very unwell; three days later I could hardly do my work, as I felt so ill, and my suboccipital lymphatic glands were enlarged and tender. On the night of the seventh day I went to bed with the intention of stopping there next day, as I felt unfit for work, and was suffering from a more or less generalised urticaria. At 12.30 a.m.

"I awoke, feeling sick, and vomited almost continuously for half an hour, till I was quite exhausted. The rash by this time had become general, and on the abdomen was in places quite the size of a five-shilling piece, and raised nearly half an inch. I was completely covered from head to foot, with the exception of the palms and soles. The irritation was almost unbearable. At 3 a.m. I was again seized with vomiting, which lasted quite half an hour. By this time my tongue had swollen, due to the urticaria, and I found some difficulty in breathing. At 4 a.m. the joints below the hip and shoulder were attacked, and became so swollen that I could not bend my fingers. By 8 a.m. the rash had almost gone, and I felt better, but on getting out of bed I found that I could not stand, and fainted. By the evening I felt well, but very shaken and weak. My temperature was normal during the week preceding the attack. I know that I had eaten nothing which could have upset me, and I believe that the vomiting was due to urticaria of the stomach. I also experienced some thoracic and abdominal pain during the height of the attack."

The writer refers to other cases, and then proceeds:—

"In consequence of the occurrence of these abnormal reactions in persons treated with anti-toxin, and of certain still more serious results, to which I shall presently refer, the subject was specially investigated by bacteriologists and physiologists in the United States. . . . A vast amount of experimental work has been

"accomplished as a result of these investigations,
"and from it one fact emerges quite distinctly,
"and that is that if you inject a foreign protein
"into an animal, you render the animal peculiarly
"sensitive to that particular protein. By "foreign"
"I mean not derived from the animal injected or
"one of its species."

The writer further observes :—

"What the exact pathology of the attack is, I
"do not profess to know. In the experiments
" . . . the guinea-pig which has been sensitised
"to horse serum dies with symptoms which
"strongly resemble those of an attack of asthma
"in the human subject. There are respiratory
"embarrassment, coughing, and sneezing, and
"breathing ceases before the heart stops beating.
" . . . Further observations, clinical as well
"as experimental, are required to clear these
"points up."

"ANTI-TOXIN AS A PROPHYLACTIC.

"Now, what is the practical outcome of these
"cases and experiments? I think I have brought
"forward enough evidence to justify the modifica-
"tion I have made during the past few years in
"my views on the subject of serum administra-
"tion. I have no desire to pose as an alarmist,
"but with a knowledge of such cases as I have
"narrated above, I am quite averse from using
"anti-toxin as a prophylactic. . . . I am
"strongly of the opinion that an indiscriminate
"use of serum as a prophylactic is not only
"unnecessary, but unjustifiable. . . . Can the
"unpleasant reactions I have been talking about

"be in any way prevented? So far as I know, they cannot; there is conflict of evidence on the subject.

"Anaphylaxis can be produced in animals by feeding them on certain proteins, so that the rectal or oral administration cannot be expected to be free from risk of the unpleasant sequels. . . . During the past few years the anti-toxic serum supplied to the Asylums Board's hospitals has been less noxious than it was at one time. I have not, however, been able to ascertain the cause of the undoubted improvement that has been effected."

No one can read these admissions without a strong sense of the foolhardiness and tremendous risk attending the whole class of these experiments.

When Metchnikoff affirms "that the serum of the blood of many animals will destroy the red corpuscles of a different species," (page 87, "Immunity in Infective Diseases"), and Dr. Winters says that "horse serum dissolves human blood corpuscles, and thereby produces new elements of decomposition," we need not be surprised that "anaphylaxis" results from the injection of serum. All the users of these dangerous, dynamitic, and death-diffusing concoctions ought to be made legally responsible and liable for the untoward effects of their operations. It seems as if in this way only can a stop be put to the more than stupid, the criminally wicked, exploitation of these reprehensible practices upon an unsuspecting public under the guise of prophylactic and curative medicine. The observation of a distinguished

biologist, that "when once you interfere with the order of Nature, there is no knowing where the results will end," is well illustrated by the statements contained in this secret professional pamphlet. The whole theory of prophylaxy by vaccination or inoculation is reduced to an absurdity. Dr. Klein, in "Micro-Organisms and Disease," Chapter XX., clinches the argument when he assures us that:—"There is no reason whatever for assuming that after one attack of illness the tissues become an unfavourable soil for a second invasion."

Consequently the occurrence of "anaphylaxy" proves that there is no prophylactic result, and that the disease is not only conveyed directly into the blood by these serum injections, but that these germs, not being eliminated, may, by their action, not only increase susceptibility, but also resume their activity after many years of apparent quiescence. Does not this fact go a long way to justify the belief that vaccination is more likely to increase susceptibility to, rather than to confer immunity from, small-pox?

Hitherto dead germs have been used to produce these various "emulsions" and "vaccines," but "living bacilli" are now advocated by no less an authority than Professor Metchnikoff.

In the "Daily Telegraph," of 10th July, 1912, under the heading, "Paris Day by Day," appears the following:—

"TYPHOID QUARREL.—Doctors are disagreeing very seriously over a new typhoid vaccine invented by Professor Metchnikoff, and briefly

"described by me the other day. His method of
 "prevention consists, broadly, of the inoculation
 "of living germs of typhus, suitably treated, by
 "processes too technical to be gone into here. In
 "announcing his discovery to the Paris Academy
 "of Medicine, Professor Metchnikoff stated that
 "experiments hitherto made in the same direction
 "with sterilised vaccine—that is to say, vaccine
 "containing only dead germs—had more or less
 "failed.

"Now, Professor Vincent, in the same Academy,
 "challenges Professor Metchnikoff's assertion
 "vehemently. He not only maintains that vac-
 "cination with sterilised or defunct bacilli has
 "been successful, but that it is the only safe
 "method. Any inoculation of healthy persons
 "with living bacilli, by any process whatsoever, he
 "describes as 'fraught with possibilities of serious
 "danger.'

"But Professor Metchnikoff retorts that 1,580
 "inoculations upon 745 persons have proved vac-
 "cination with living typhoid bacilli to be harm-
 "less. Three chimpanzees were inoculated with
 "a much more violent culture, and the result was
 "the same. There is no danger either that the
 "inoculated persons should catch typhoid, or that
 "they should spread contagion. Finally, though
 "the experiments have not yet been carried on
 "long enough to allow of definite conclusions
 "being arrived at, it is 'more than probable' that
 "the vaccination of the persons mentioned has
 "rendered them impervious to typhoid. In short,
 "the two Professors, specialists in bacteriology,
 "contradict each other diametrically on the ques-

"tion of typhoid fever. In the circumstances, the layman must leave the quarrel at that."

We might view with equanimity the struggle for supremacy between these rival schools were it not for the fact that, unfortunately, the final arbitrament on these perplexing and dangerous problems is reached only through experiments on human subjects. Common circumspection would therefore dictate, apart from all other considerations, the prudence of leaving all these reprehensible practices severely alone.

CHAPTER CXVIII.

SEA WATER AND DIARRHŒA.

THE inoculation mania has now extended to diarrhœa. Subcutaneous injections with prepared sea water are said to modify the attack. There is, however, considerable difference of opinion as to the results. Some references made to this subject in the "Medical Annual," for 1910 and 1911, are not of a very reassuring character.

One medical authority says that any benefits from these subcutaneous injections are, at the least, "doubtful." Others say their results are "uncertain," or not of sufficiently pronounced value to continue. Indications are not wanting to show that very soon this new-fangled remedy will go to swell the already long and lengthening list of impostures exploited upon a too credulous public.

In the "Medical Annual," 1912, page 226, Dr. G. F. Still, M.D., F.R.C.P., writing on "Infantile Diarrhœa," says:—"The value of subcutaneous infusions has been exploited recently, by the lay press, in connection with the use of sea water for this purpose, which was introduced a year or two ago in France. The supposed virtue of the sea water lies, apparently, in the fact that, by the addition of spring water, it is rendered isotonic with human blood. Whether the par-

“ ticular combination of salts in sea water has
“ any special value in cases of infantile diarrhœa
“ is doubtful ; certainly its use by some competent
“ scientific observers has not justified the extra-
“ vagant claims made for it. Any method of
“ supplying fluid to an infant drained of water
“ by severe diarrhœa has, as has been recognised
“ for many years, a life-saving value in many
“ cases, and subcutaneous administration has been
“ practised for a long time for this purpose.”

None of this is very encouraging, and I doubt if the excessive infantile diarrhœa, to which Leicester is particularly subject, is destined to be diminished by such a practice. When we take into account the risks of contamination of the sea water, the rapid decomposition which occurs, and the abominable odour when small quantities are separated from their restless native element, the outlook is rather dismal for the hapless patients.

It is said that the sea water used is obtained several miles away from the shore, and from considerable depths, to avoid the contamination from sewage. This may lessen, but certainly does not entirely eliminate, the danger. Then the sea water is mixed with spring water, which, again, may also be impregnated. In any case, like vaccination and other inoculations, the risks from these injections are materially greater than any benefits that are likely to accrue, and the sooner this “ treatment ”—if it is worth dignifying by the name—is abandoned, the better.

We are told that the water passes through certain purifying processes, but bearing in mind

the remarkable processes by which "pure lymph" is obtained for vaccination, even that assurance does not make the new idea at all palatable. Like the people of Athens, too many of the faculty are ever looking out for some "new thing," and, in this "germ"—and "inoculation"—ridden age, they seem to prefer any nostrum which provides novelty, to the unfailing and beneficent working of Nature's laws in effecting the cure of disease.

The Medical Officer of Leicester, a thorough-paced inoculist, has tried it, but the results are by no means satisfactory. Dr. Millard visited the Quinton Polyclinic in Poland Street, Soho, London, and on his report, which was almost certain to be favourable, he says "it was decided by the Sanitary Committee to give this method of treatment a trial." Ten infants suffering from diarrhœa were experimented upon, and of these "several cases appeared to improve very rapidly and remarkably; some improved slowly; whilst in three cases there was no real improvement, and the cases ultimately proved fatal. Two or three additional cases discontinued the treatment after one or two injections."

A death-rate of nearly one-third of the cases is a stiff rebuke to this tampering quackery, but it surprises me that the Sanitary Committee of Leicester, to whose care and oversight these infants are committed as a sacred charge, should with so much docility surrender them to be the "Corpus Vilis" of experimental fanaticism.

As Leicester, from its geographical position, suffers very much from diarrhœa, a treatment that would cope with and moderate the disease

would be especially welcome, but it should be remembered that injections and inoculations are not "treatment" of a disease, but a hocus-pocus.

When these experimental suggestions are made, it would be wise to remember the words of the Right Hon. A. J. Balfour, M.P., who, in the Parliamentary debate on the Imperial Defence Committee, remarked that:—"Everyone who will
"look through the history of medical opinion as
"regards public health during the last fifty years,
"and the amount of money spent in obedience to
"medical opinion, will find as great a crop of
"errors, and as large an expenditure of public
"money which subsequent knowledge has shown
"to be ill-spent, as anything connected with the
"Army and Navy. . . . As long as the House
"of Commons is not entirely composed of men
"possessing Solomon's wisdom, so long shall we,
"acting on the best opinion we can obtain and
"which science shall give, commit errors which
"the science of the next day will say have been
"of the grossest description."

The foundering of the "Titanic," with its awful death-roll of 1,500 victims, was the most appalling and unparalleled disaster of the sea. It touched the hearts, evoked the chords of human sympathy, and struck the imagination of a startled world. But what is a loss like this—a mere drop in the ocean—compared with the thousands upon thousands who yearly, all over the world, pass unobserved and silently to a premature grave, the hapless and helpless victims of experimental inoculations, the outcome of medical science, "falsely so called,"

PART XIV.

SUMMARY AND CONCLUSIONS.

CHAPTER CXIX.

A THOROUGHLY IMPARTIAL INQUIRY WANTED.

It is not a difficult matter to summarise the experience of Leicester with regard to small-pox and vaccination. The preceding chapters provide a wealth of subject matter and detail respecting the growth of sanitation and the decadence of the vaccine dogma in the Borough.

The small-pox epidemic of 1871-73, in Leicester, not only tested vaccination, but afforded an opportunity to show its prophylactic power in face of an attack. Leicester people saw that the system failed egregiously, and they would not have any more of it. What an outcry there would be to-day if a similar epidemic occurred! Yet we should—in proportion to the population—require no fewer than 840 small-pox deaths to merely equal the disastrous consequences of that well-vaccinated period!

Leicester parents thenceforward suffered whole-

sale and bitter persecution for non-compliance with an Act of Parliament which was passed to enforce an operation they knew to be a failure, and believed to be injurious to their children's health. The Members of Parliament for Leicester, or some of them, did what was possible in the House of Commons to get the law repealed. Mr. P. A. Taylor became a member of the Committee of 1871, and signed its Report, but, finding he had been deceived and that the anti-vaccinators were right, he strove his utmost to make amends, and afterwards gave unstinting support to the anti-vaccination cause. He moved a resolution against compulsion in the House of Commons in 1883, but was defeated by a large majority. Mr. J. A. Picton moved for a Royal Commission in 1889, and was successful. The outcome of that Commission has already been referred to, but may be summarised here.

In the appointment of the Royal Commission the Government, as proved by the speeches delivered during the debate, was strongly biassed in favour of vaccination, and nearly all the Royal Commissioners were also strongly predisposed in the same direction.

The Royal Commission heard a mass of evidence adverse to vaccination, including that from Leicester, and after seven years' deliberations issued their Final Report in 1896, coming to almost the same conclusions as the anti-vaccinators of Leicester and elsewhere had arrived at many years before, that vaccination was not the protective from small-pox it had been assumed and alleged to be ; that it inflicted injury, spread disease, and caused

death to an extent they had not surmised ; that it was unjust to punish parents for defending their children ; and that if they were punished by imprisonment, the severity of the imprisonment should be relaxed. But justice demanded something more than this—not ameliorative measures only, but entire repeal. The Report of the Royal Commission, favourable as it was to anti-vaccinists, was nevertheless prejudiced and distorted by its omissions and equivocations.

When the Government Bill was brought in to give effect to the Report, it did not even purport to embody the whole of the recommendations. So that we had a biassed Government appointing a predisposed Commission, which produced a distorted Report. Upon this Report, an inadequate Bill was presented to the House of Commons. The Government, by an unworthy subterfuge, induced the late Mr. E. H. Pickergill, M.P., to withdraw his clause which safeguarded the authority of the Guardians. When the Act was passed, it was found that the Guardians had been deprived of their control of Vaccination Officers—a most unsatisfactory outcome—which has caused much friction with the Local Government Board.

Since vaccination started on its career of devastation, no thoroughly impartial inquiry as to its presumed merits has ever been held. The Royal Commission of 1889, excepting so far as suited their purpose, ignored the convincing evidence concerning Leicester. A really honest and thorough inquiry ought to be held, and the evidence effectually probed and sifted, both sides being represented thereon by equal numbers of their strongest

advocates, under the presidency of a chairman entirely unconnected with the medical faculty, and selected—with the acquiescence of both sides—for his independence and strict impartiality.

The offer of the erstwhile tempting bait of “glycerinated calf lymph,” suggested by the Commission and adopted by the Government, has not resulted in beguiling the people of Leicester. They have no more faith in the up-to-date nostrum than in any of the other varieties of vile viruses that the purveyors of these “preposterous adulterations” have offered before, and it is most unlikely that any “base concoction” of this character will ever prove acceptable to them.

CHAPTER CXX.

LEICESTER EVIDENCE REVIEWED.

FORTY years have elapsed since the town suffered from the serious small-pox epidemic already referred to. At that time, the people of Leicester were vaccinated nearly 100 per cent. Notwithstanding this so-called "protected" condition of the population, small-pox spread like wild-fire; thousands of cases occurred, and 360 deaths resulted. The authorities were paralysed, and drifted helplessly with the epidemic tornado which swept across the town. At the close of this disastrous visitation, all the comfort they could derive from their pro-vaccinist Medical Officer of Health was, that "Taking former experience as our guide, we may indulge, I think, a well-grounded hope that five or six years will, at least, elapse before another epidemic of small-pox occurs in Leicester." Certainly not a very robust confession of faith, after all that had been claimed by him for vaccination, but almost as robust as that of the Royal Commission, thirty-four years later, after an exhaustive examination of the subject for six or seven years.

Leicester, by its renunciation of vaccination, now affords a fairer ground for comparison, and exposes the falsity of the highly-extravagant unvaccinated small-pox fatalities, so often paraded

by pro-vaccinists to uphold vaccination. Accepting the reports of our Medical Officers, the over-all case fatality of the epidemic of 1892-94 was but 5.34, and that for 1902-04 only 3.49 per cent. The over-all case fatality of the unvaccinated for 1902-04 was only 4.87 per cent., but Dr. Millard divides the outbreak into two distinct epidemics, as there was a short interregnum without any cases occurring. For the epidemic of 1902-03, he gives the unvaccinated case fatality as 8.08 (correctly, only 7.4), and that for 1903-04, the low rate of merely 1.6 per cent. The contrast between these remarkably low small-pox death-rates in "unprotected" Leicester and those in efficiently-vaccinated communities is very striking indeed, and most impressive. It will, therefore, be seen that the larger the proportion of supposedly "unprotected" people, the lower the death-rate from small-pox when that disease is present.

For forty years Leicester has continued its sanitary work, and practically ignored vaccination. During that extended period its Medical Officers of Health have all been strong pro-vaccinists, and have done all that lay in their power to promote and favour vaccination. During those forty years, no less than seventy-four importations of small-pox by vaccinated persons from well-vaccinated districts have had to be grappled with.

As the result of these importations of vaccinated small-pox, and including the two relatively small epidemics of 1892-94 and 1902-04, numerous outbreaks of the disease have occurred, resulting in at least 1,223 cases, with 71 deaths. Compare this with the thousands (an unknown number) of

cases and 346 deaths in a single year—1872—when nearly all were “protected”!!!

All these outbreaks and epidemics have been successfully stamped out by the “Leicester Method” of isolation and quarantine, with little, if any, recourse to vaccination. Whatever vaccination and revaccination may have taken place has been a mere “drop in the ocean,” emphasising yet more vividly, if possible, not only its non-necessity, but also its utter failure as a prophylactic.

During those forty years not a single farthing has been added to the rates in consequence of the visitations of small-pox. The hospital expenditure has remained normal, and whatever trifling additional cost (if any) has been incurred, has been discharged out of the ordinary expenditure.

During those forty years, without vaccination, the health of the inhabitants has continued to improve; the death-rate has gone down from 27 per thousand in 1872 to only 11.3 per thousand in 1910, representing an annual saving, on our present population, of about 3,370 lives. During the same period, the death-rate from zymotic diseases has fallen from 8,235 per million in 1872 to only 690 per million in 1910; whilst small-pox, the *bête noir* of diseases against which Leicester is said to be “unprotected,” and to which it is assumed to be especially liable, has been reduced to a fractional insignificance, no death from small-pox having occurred in twenty-seven out of the forty years.

If Leicester had but held its own, or kept

within a proportionate distance, compared with its competitors in the race for health, throughout this long series of forty years, this would have sufficiently disproved any claim put forth in favour of vaccination. But Leicester has done more than this! It has not only outstripped every large town of a similar character, but has even overtaken and beaten England and Wales in the lowness of its death-rate.

If pro-vaccinists could reverse what Leicester has accomplished; if they could point to a solitary vaccinated town with an equally unique record of health; if they could put unvaccinated Leicester back to the high small-pox death-rate and awful death-roll which cursed her population during the years of highest vaccination, then we should probably hear of the great and undisputed blessings of vaccination. As they cannot do this, they are bound, in common honesty and decency, to acknowledge that Leicester, without vaccination, is immensely better off, not only as regards small-pox, but also in respect to all zymotic diseases, and the all-causes death-rate, too.

CHAPTER CXXI.

LEICESTER EVIDENCE—ITS TEACHINGS.

IN the foregoing pages, Leicester has been put to the most severe possible tests and comparisons with vaccinated and revaccinated communities; also with the Army and Navy. Whether that test has been for prevalence of disease, for fatality-rate, for cost of small-pox epidemics, or for general mortality, the result has been uniformly successful, and in every instance Leicester has emerged triumphantly from the ordeal.

The holding of the Annual Congress of the Sanitary Institute at Leicester, in 1885, on 22nd September and following days, provided the medical men assembled with an opportunity not to be missed. Professor Du Chaumont, in the course of his presidential address, said :—" Leicester " had constituted itself a principal centre opposed " to vaccination, and he believed it was insisted " that sanitation was sufficient to prevent small- " pox. With special preparations and strict " isolation they had been able to keep the town " free from the disease, and he would be a bad " sanitarian if he did not recognise the value of " both these measures." But, notwithstanding this, he went on to predict that when the population became more unvaccinated, a " rude awakening " would one day overtake the Borough.

On 23rd September, Surgeon-Major Pringle read a paper on " Vaccination versus Isolation as

a Prevention of Small-Pox." He affirmed he had tried both, but preferred the former. Professor Corfield said "the greatest credit was due to Leicester for its sanitary work," and he admitted that belief in vaccination had caused neglect of sanitation. Dr. Cameron and others followed. Dr. A. Carpenter said "Leicester kept powerful sanitary engines," but he preferred vaccination in addition.

The anti-vaccination leaders were absent from the town (at the Annual Conference of the National Anti-Vaccination League, then being held at Bedford), but the practice and traditions of Leicester on this question were worthily and effectively upheld by Alderman T. Windley, Councillor F. T. Mott, and Mr. J. T. Stephen. The "Times" referred to the latter's speech, in a leading article on the subject, and this was followed by a lengthy correspondence. The writers, who for the most part were pro-vaccinists, did not attempt to claim that vaccination exclusively was prophylactic of small-pox, but that vaccination and isolation should go together. Leicester was, therefore, complimented rather than blamed, and the discussion resolved itself into a question whether sanitation should be supplemented by vaccination, or whether vaccination should be supplemented by sanitation.

Twenty years elapsed, and the predicted "rude awakening" was still in the prophetic stage, when a yet more important assembly, the British Medical Association, held its annual gathering in Leicester, about 1,000 medical visitors being present here, in July, 1905. This was an especially golden opportunity to convince Leicester of the error of its ways; but it is a most remarkable and significant

fact that, beyond a jocular allusion to "antis" in the "popular lecture," delivered by Professor William Stirling, M.D., LL.D., in the Royal Opera House, on the 28th of July, when he took as his subject, "Fatigue and Repose," during the whole of the proceedings of the delegates, no public reference of any kind was made to the anti-vaccination proclivities of Leicester!!!

Although innumerable threats, epithets, charges, and prophecies of evil have been hurled against Leicester for its rejection of vaccination; in spite of obloquy and unparalleled persecution, Leicester has never deviated from the straight road to sanitary perfection, and is now reaping a rich reward in its healthy population, endowed with increased strength and stamina, a low death-rate, and the prolongation of the life of its people.

Through evil and through good report, it has proceeded to establish an unassailable and impregnable position of sanitation as opposed to vaccination, and while the town's struggles for freedom through Saxon, Norman, Stuart, and Hanoverian times were national in their effect, its efforts and struggles for parental liberty and cleanness of life by sanitation have now become world-wide in their renown and potency. Leicester's experiment is open to, and known by, the whole world. There is no need to "wait and see," but "come and see." We are prepared for the closest investigation, and cordially invite it. This practical test, carried on for forty years, in a population now approaching a quarter of a million, cannot be regarded as unimportant either in respect to population or duration of time.

What more is expected, or required, of Leicester before her unique achievement by means of the "Leicester Method" is to be accepted as *un fait accompli* by the medical world? The Government of the day rewarded Jenner with £30,000 for his supposed discovery of vaccination, after a short period of occult equivocation, and without proof or adequate test. It would be a much more profitable investment of the public funds for the Government to pay off Leicester's municipal debt, as some recognition of the invaluable lesson in public health which she has demonstrated before the world, and thus set her free to reach greater heights of perfection in sanitary and municipal administration.

In connection with the Annual Congress of the Sanitary Institute, at Manchester, in September, 1902, the author enjoyed the pleasure of hearing Sir William J. Collins, M.D., deliver what is known as "the popular lecture," taking as his subject, "The Man versus the Microbe." The Dean of Manchester occupied the chair, and, in the course of his address, Sir William Collins observed :—

"Bacteriology has doubtless done much for pathology, but it has done much less than scientific persons both in and out of the profession are apt to imagine. It has not yet helped us to understand the nature of any one of the ordinary acute specific diseases of man, in the sense that it has unquestionably identified a specific microbe as the cause of any one of them.

"It is usual at Congresses like this to bestow

“ an anathema upon that intransigent section of
 “ the community collectively spoken of as ‘anti’s.’
 “ Of that negative and implacable class I know of
 “ none more pestilent and dangerous than the anti-
 “ sanitationist, whether he appear in the form of
 “ a ‘pragmatical quack,’ the owner of slum prop-
 “ erty, or the adviser of a Government department.

“ Filthy conditions and the imperfect removal
 “ of effete material, without and within the body,
 “ are the factors of zymotic pestilence, which
 “ aforetime walked in darkness, but is now made
 “ plain by the revealing light of science.

“ Southwood Smith observed :—‘ The human
 “ family have now lived together in communities
 “ more than six thousand years, yet they have
 “ not learned to make their habitations clean.
 “ At last we are beginning to learn the lesson.
 “ When we shall have mastered it, we shall have
 “ conquered epidemics.’

“ If with the ‘Times’ newspaper I have con-
 “ demned dogma as out of place in medicine, if
 “ I have argued for breadth of view and philo-
 “ sophic insight against a narrow specialism and
 “ a too rigid professionalism, it is not with a
 “ desire to disparage the magnificent and industri-
 “ ous researches into all departments of pathology
 “ which have become so striking a feature of
 “ modern times. It is rather that I may emphasise
 “ the greater necessity there is that the true student
 “ of sanitary science should, like Faraday’s true
 “ philosopher, be ‘a man willing to listen to every
 “ suggestion, but determined to judge for him-
 “ self. He should not be biassed by appearances,
 “ have no favourite hypothesis, be of no school,

“and in doctrine have no master. He should not
 “be a respecter of persons ; truth should be his
 “primary object. If to these qualities be added
 “industry, he may indeed hope to walk within
 “the veil of the temple of Nature.’ He may be
 “the object of ridicule by the ignorant, or the
 “target for scorn and criticism from those whose
 “vested interests his duties require him to disturb ;
 “but the true sanitarian intent on enduring work
 “will not suffer such to distract him from his
 “task. The temple of Hygeia needs many hands
 “and various arts to complete it and adorn it, and
 “in the building of that stately edifice each one
 “of us may play a humble part.”

Leicester anti-vaccinists, and the town at large, have followed this course most successfully, and have done their part in the building of this temple. They are fully in accord with the principles thus enunciated, and are also in agreement with the opinions expressed in the “Lancet,” of 12th September, 1891 :—

“There are few things which are more interest-
 “ing, few which are better fitted to instruct while
 “they humiliate, than an occasional retrospect of
 “the fate which befalls new remedies or fresh
 “measures which are ever and anon being intro-
 “duced for the alleviation or cure of disease. Each
 “has, as a rule, to pass through three distinct
 “stages. The first is the stage of unreasoning
 “enthusiasm, when much is said about a sovereign
 “balm or a great advance in therapeutics, and
 “when a pitying contempt is expressed for anti-
 “quated methods hitherto in use. After a little
 “time a second stage is reached. The natural

“ swing of the pendulum has come, and disillusion
 “ and disenchantment, with the irritation which
 “ these processes beget in the too credulous, take
 “ the place of unlimited praise and fulsome adula-
 “ tion. It is now discovered that the hitherto
 “ vaunted remedy is not only useless, but that it
 “ is positively harmful.”

It would be impossible for anyone to write anything more apposite, either on vaccination or any of the other processes of inoculation. If medical practitioners would but keep these injunctions of one of their leading medical journals in mind, excellent results would soon be manifest.

From my own experience, I know full well of the many sacrifices that are made by medical men, and, therefore, it has been my aim to avoid using language of my own, which might be construed as hurtful or offensive. For that reason, all quotations condemnatory of medical practice are selected from medical men and medical sources.

The Art of Healing appeals to mankind in a manner that nothing else can. Its most successful achievements have been accomplished when pursued on Nature's lines and with Nature's aid. Medical progress has been, and is, hampered with a curriculum and pharmacopæia, both of which are not only out of date, but are overladen with and burdened by cults and quackeries. Many of these modern practices are worse than anything we hear of in the witcheries and enchantments of the past. If they could be considered apart from the prestige, *esprit de corps*, etiquette, and false professional glamour by which they are surrounded and upheld, they would not only be scouted as

insane and preposterous, but rejected and condemned by the profession itself.

The profession of medicine is honourable, and is honoured, but in no respect is it more so than in the self-sacrificing spirit and the humanitarian zeal with which its members often perform their highly skilled and exacting labours. The sympathy and mercy that have distinguished the practice of the healing art in all times have ennobled the history of mankind. I desire, in this matter of vaccination, that the profession should not forget its great traditions, or continue to refuse that candour and fairness to this subject which they have been willing and eager to bestow on many questions of far less importance to the health and well-being of the community.

An impartial study of the health history of my native town will, I feel sure, lead any fair-minded and unfettered practitioner to the conviction that a serious error has been committed by his profession in days gone by, at a time when knowledge was far less advanced than it is to-day, and that the error is being persisted in blindly and unreasonably, against an overwhelming weight of evidence.

The great lesson, both moral and physical, taught by the experience of Leicester is:—That personal and municipal cleanliness secure enhanced if not perfect health, alike to the individual and to the municipality, and proves that there is still effective vital force in the venerable precept—

“WASH AND BE CLEAN.”

APPENDIX.

TABLES 41 TO 56.

TABLE 41.

Being Table 16, Royal Commission, Fourth Report, carried to 1910.

Table showing, for the BOROUGH OF LEICESTER, for each of the years 1838-1910, the number of deaths from each of the seven principal zymotic diseases.

Year.	Small-Pox.	Measles.	Scarlet Fever.	Diphtheria.*	Whooping Cough.	Fever.	Diarrhoea.
1838	11	5	1	2	27	63	46
1839	50	42	2	5	41	67	49
1840	56	185	97	4	22	96	116
1841	31	8	75	4	13	85	97
1842	0	88	14	5	27	71	88
1843	0	82	15	0	17	41	62
1844	9	4	97	3	63	42	75
1845	164	151	74	2	9	36	61
1846	12	4	10	1	11	177	237
1847	1	28	3	4	54	49	95
1848	31	60	14	0	23	82	129
1849	66	68	5	2	60	89	124
1850	5	48	11	3	10	81	89
1851	2	36	49	0	13	71	162
1852	52	3	160	5	63	81	154
1853	11	8	41	2	35	104	138
1854	0	129	10	6	17	101	156
1855	0	1	5	3	7	54	113
1856	1	15	11	2	22	34	115
1857	17	66	102	5	32	110	202
1858	53	55	175	4	33	92	120
1859	3	53	39	10	86	38	104
1860	2	6	2	2	7	11	56
1861	1	124	1	4	41	61	160
1862	0	6	14	2	44	49	99
1863	5	91	236	7	31	51	170
1864	104	3	47	2	38	37	180

* From 1838 to 1858, deaths registered from putrid and other sore throats have been tabulated as Diphtheria.--
J. T. B.

TABLE 41.—Continued.

Year.	Small-Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fevers.	Diarrhoea.
1865	10	86	8	3	20	56	226
1866	3	13	9	3	46	53	147
1867	2	2	40	3	62	42	209
1868	1	247	9	10	6	63	349
1869	0	43	8	9	70	57	272
1870	0	42	263	11	65	52	240
1871	12	35	112	7	32	56	302
1872	346	36	5	2	51	64	305
1873	2	62	6	7	64	55	314
1874	0	24	18	8	43	48	257
1875	1	49	175	7	91	64	308
1876	0	50	173	10	33	43	263
1877	6	40	33	9	65	20	185
1878	1	45	12	5	82	31	302
1879	0	72	105	11	61	21	88
1880	0	166	119	23	27	46	398
1881	2	7	184	11	122	29	193
1882	5	74	72	5	19	19	214
1883	3	15	91	6	59	10	148
1884	0	57	63	11	66	16	344
1885	0	52	113	14	52	36	186
1886	0	43	44	4	27	19	256
1887	0	87	5	13	55	31	247
1888	0	77	4	13	86	32	148
1889	0	62	6	10	26	22	221
1890	0	30	38	11	16	24	218
1891	0	84	17	14	136	29	204
1892	6	126	41	10	52	17	214
1893	15	52	81	20	112	47	399
1894	0	106	30	12	12	27	176
1895	0	29	15	36	87	38	369
1896	0	120	48	53	47	40	272
1897	0	12	73	73	82	38	360
1898	0	211	44	63	19	27	323
1899	0	31	42	222	84	28	292
1900	0	49	28	316	46	26	286
1901	0	17	6	155	77	20	224
1902	5	73	11	29	67	12	137

TABLE 41.—Continued.

Year.	Small-Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fevers.	Diarrhoea.
1903	21	74	15	28	36	13	133
1904	4	32	4	6	89	14	289
1905	0	53	36	11	50	9	211
1906	0	80	52	27	112	14	258
1907	0	60	44	17	14	5	73
1908	0	167	29	9	30	8	120
1909	0	109	23	14	51	5	106
1910	0	13	15	11	53	10	70

TABLE 42.

Being Table 19, Royal Commission, Fourth Report, carried to 1910.

Table showing, for the BOROUGH OF LEICESTER, for each of the years 1838-1910, the death-rate from each of the seven principal zymotic diseases per million living, with, for each of the years 1849-1910, the percentage of registered vaccinations to births.* (See Diagram G, for Small-Pox.)

Year.	Small-Pox.	Measles	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fevers.	Diarrhoea.	Totals.	Percentage of Registered Vaccinations to Total Births.
1838	230	104	21	42	565	1,319	963	3,244	Not known.
1839	1,024	860	41	103	840	1,374	1,000	5,242	
1840	1,121	3,703	1,942	80	440	1,923	2,322	11,531	
1841	607	156	1,460	78	254	1,666	1,901	6,131	
1842	0	1,694	268	96	521	1,367	1,694	5,640	
1843	0	1,549	284	0	322	776	1,174	4,105	Returns incomplete
1844	167	74	1,804	56	1,172	781	1,395	5,449	
1845	2,994	2,758	1,351	37	164	657	1,114	9,075	
1846	215	72	180	18	198	3,170	4,260	8,113	
1847	18	494	53	70	952	864	1,676	4,127	
1848	537	1,040	243	0	398	1,421	2,235	5,874	
1849	1,124	1,157	85	34	1,022	1,516	2,112	7,050	74.2
1850	84	803	184	50	167	1,355	1,489	4,132	55.3
1851	33	594	806	0	214	1,168	2,666	5,481	53.0
1852	846	49	2,603	81	1,025	1,317	2,506	8,427	68.6

TABLE 41.—Continued.

Year.	Small-Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fevers.	Diarrhoea.
1903	21	74	15	28	36	13	133
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1906	0	80	52	27	112	14	258
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1839	1,024	860	41	103	840	1,374	1,000	5,242	
1840	1,121	3,703	1,942	80	440	1,923	2,322	11,531	
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1842	0	1,694	268	96	521	1,367	1,694	5,640	
1843	0	1,549	284	0	322	776	1,174	4,105	Returns incomplete
1844	167	74	1,804	56	1,172	781	1,395	5,449	
1845	2,994	2,758	1,351	37	164	657	1,114	9,075	
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1848	537	1,040	243	0	398	1,421	2,235	5,874	
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1850	84	803	184	50	167	1,355	1,489	4,132	55.3
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1852	846	49	2,603	81	1,025	1,317	2,506	8,427	68.6



DIAGRAM

ILLUSTRATING SMALLPOX IN FI

(See APPEN

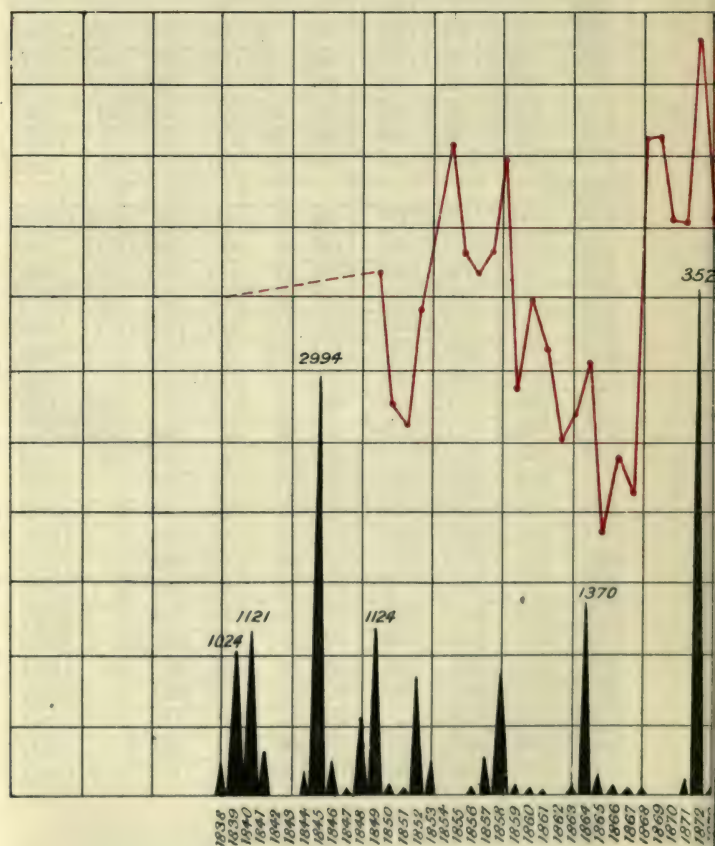
SMALLPOX. LEICES

Pyramids—Annual Smallpox death-rate per million living.

Where the smallpox death-rate exceeds 1000 per million in any single

← ---

Smallpox during Vaccination Period. ---



GRAM G.

N FIRST COLUMN OF TABLE 42.

(APPENDIX).

LEICESTER, 1838-1910.

ving.

Red Curve—Annual registered vaccinations to
5000 births.

any single year, the death-rate is denoted by figures at the top of the pyramids.

-----X----- Smallpox during "Leicester Method." ----->

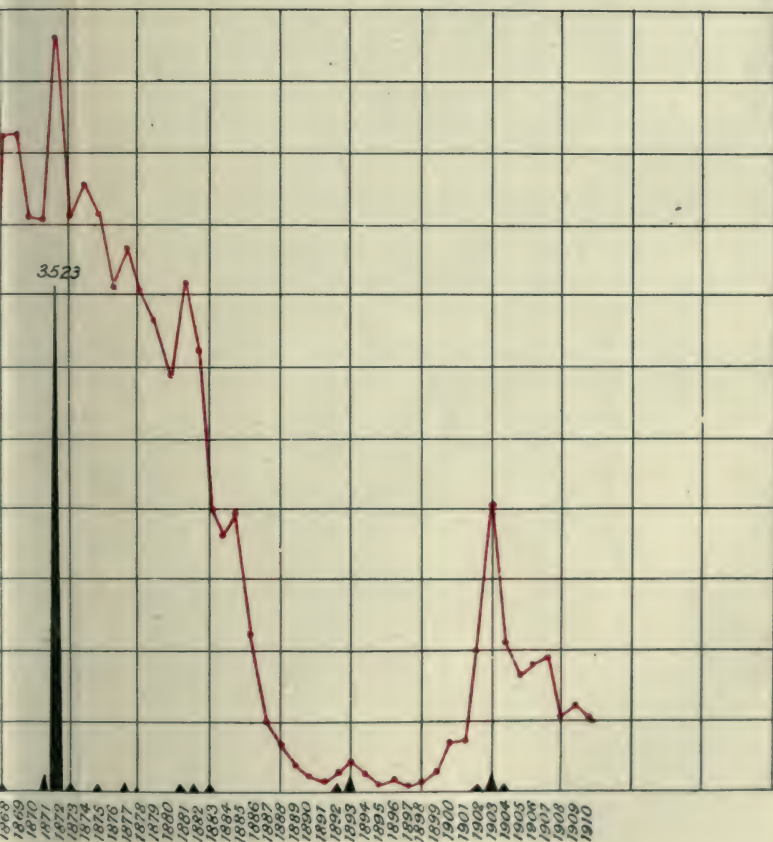




TABLE 42.—Continued.

Year.	Small. Pox.	Measles	Scarlet Fever.	Diph- the- ria.	Whoop- ing Cough.	Fevers.	Diarr- hoea.	Totals.	Percentage of Regist'ed Vaccinations to Total Births.
1853	177	128	659	32	563	1,672	2,220	5,451	80·7
1854	0	2,050	159	95	270	1,604	2,480	6,658	92·6
1855	0	16	78	47	110	850	1,776	2,877	76·9
1856	16	233	171	31	342	528	1,785	3,106	73·7
1857	261	1,013	1,566	76	491	1,688	3,102	8,197	77·0
1858	804	834	2,655	61	501	1,397	1,818	8,070	88·9
1859	45	795	535	150	1,290	570	1,560	4,995	57·5
1860	30	89	30	30	103	163	830	1,275	68·9
1861	15	1,806	15	58	597	888	2,332	5,711	63·4
1862	0	84	197	28	620	690	1,394	3,013	50·9
1863	68	1,227	3,182	93	418	688	2,292	7,968	54·7
									*(140·4)
1864	1,370	39	619	26	500	487	2,371	5,412	61·5
1865	127	1,095	102	38	254	713	2,877	5,206	36·7
1866	37	160	111	37	566	653	1,811	3,375	48·1
1867	24	24	479	36	742	503	2,504	4,312	43·2
1868	12	2,843	103	115	69	725	4,017	7,884	94·2
1869	0	478	89	100	778	634	3,025	5,104	94·7
1870	0	452	2,833	118	700	560	2,585	7,248	81·7
1871	125	368	1,176	74	336	588	3,171	5,838	81·1
1872	3,523	366	51	20	519	651	3,105	8,235	107·1
1873	20	615	60	69	635	545	3,115	5,059	83·0
1874	0	232	174	77	416	464	2,489	3,852	86·1
1875	9	463	1,654	66	859	605	2,911	6,567	82·6
1876	0	461	1,593	92	304	396	2,422	5,268	71·7
1877	54	359	293	80	583	179	1,661	3,212	76·9
1878	9	394	105	44	718	271	2,646	4,187	70·6
1879	0	616	899	94	521	179	753	3,062	67·0
1880	0	1,383	991	192	224	383	3,316	6,489	59·4
1881	16	57	1,495	89	991	238	1,568	4,454	72·5
1882	40	586	571	40	150	150	1,695	3,231	64·0
1883	23	116	703	46	456	77	1,145	2,566	40·6
1884	0	430	475	83	497	121	2,594	4,200	36·3
1885	0	382	829	102	382	264	1,366	3,325	39·3

* For the actual number of annual vaccinations, and the extra vaccinations, 1863-64, see Table 50.

TABLE 42 —Continued.

Year.	Small-Pox.	Measles	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fevers.	Diarrhoea.	Totals.	Percentage of Registered Vaccinations to Total Births.
1886	0	308	315	29	193	136	1,832	2,813	23·1
1887	0	607	35	90	384	217	1,724	3,057	10·0
1888	0	524	27	89	585	218	1,008	2,451	6·5
1889	0	412	39	66	173	146	1,468	2,304	3·6
1890	0	194	246	71	104	156	1,412	2,183	2·7
1891	0	474	96	78	767	164	1,150	2,729	1·9
1892	33	696	226	55	288	94	1,141	2,533	2·3
1893	84	282	440	108	608	255	2,162	3,939	4·3
1894	0	566	160	64	64	144	931	1,929	2·2
1895	0	152	78	188	456	199	1,904	2,977	1·3
1896	0	618	247	273	242	206	1,369	2,955	1·4
1897	0	60	369	374	415	202	1,768	3,188	1·3
1898	0	1,046	208	313	94	134	1,399	3,194	1·4
1899	0	151	205	1,083	411	137	1,364	3,351	3·5
1900	0	234	134	1,514	220	124	1,430	3,656	7·5
1901	0	80	28	729	362	94	1,120	2,413	7·8
1902	23	337	51	134	310	55	633	1,543	20·8
1903	95	336	68	127	163	59	604	1,452	41·3
1904	18	143	18	27	397	62	1,289	1,953	21·4
1905	0	232	158	48	219	39	925	1,622	16·7
1906	0	345	224	116	482	60	1,111	2,339	18·3
1907	0	254	186	72	59	21	309	902	19·7
1908	0	695	121	37	125	33	500	1,510	11·6
1909	0	446	94	57	209	20	434	1,260	12·2
1910	0	52	60	44	213	40	281	690	10·5

TABLE 43. (See Diagram H.)

Being Table No. 20, Royal Commission, Fourth Report, continued to 1910.

Table showing, for the BOROUGH OF LEICESTER during the years 1838-1910, in quinquennial periods, the average annual death-rate from each of the seven principal zymotic diseases per million living, and the percentage of the deaths from each of those diseases to the deaths from all of them, with the average annual registered vaccinations to 10,000 births.*

DIAGRAM H.

ILLUSTRATING TABLE 43. (See APPENDIX). LEICESTER—ZYMOTIC MORTALITY, 1838—1910.

This Diagram shows:—

- (1) The average annual death-rate per million population from the seven principal zymotic diseases, with the relative proportion of deaths from each disease, in quinquennial periods 1838-1910.
- (2) The average annual registered vaccinations to 10,000 births.
- (3) An unprecedented increase of zymotic mortality coincident with the highest vaccination period 1868-72; and
- (4) A marked decline of zymotic mortality also coincident with the decline and practical abandonment of vaccination subsequent to 1872.

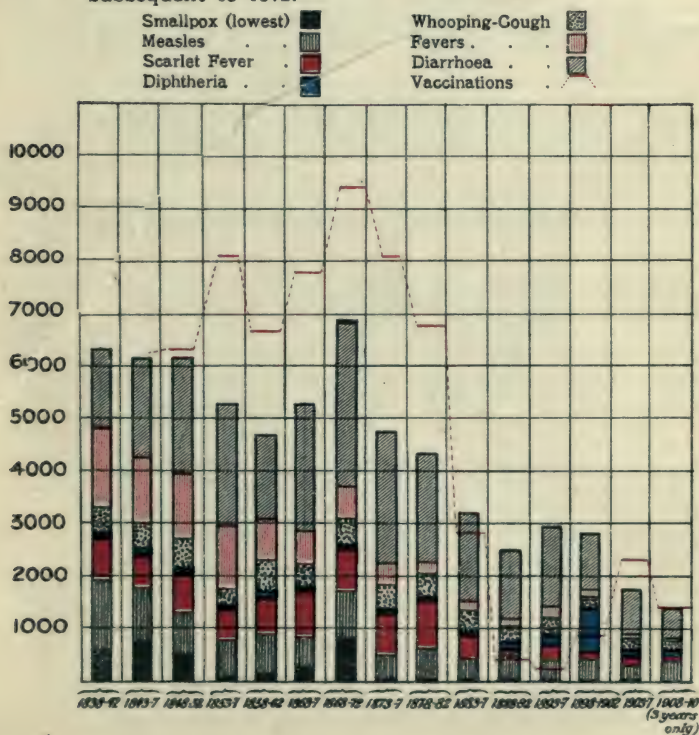


TABLE 43.

Periods.	Small-Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fevers.	Dissemin.	Totals.	Average Annual Registered Vaccinations to 10,000 Births.
1838-42	Per Million 592	1,313	757	80	520	1,529	1,586	6,377	Not known.
1843-47	Percentage 9.3	20.6	11.9	1.2	8.1	24.0	24.9	100	
1848-52	Per Million 679	983	727	36	563	1,260	1,938	6,186	Returns
	Percentage 11.0	16.0	11.2	0.6	9.1	20.6	31.5	100	incomplete.
1853-57	Per Million 522	719	800	34	565	1,352	2,201	6,193	6,278
	Percentage 8.4	11.6	12.9	0.5	9.1	21.8	35.7	100	(4 years.)
1858-62	Per Million 91	688	531	57	355	1,267	2,276	5,265	8,018
	Percentage 1.7	13.1	10.1	1.1	6.7	24.0	43.3	100	
1863-67	Per Million 175	723	685	65	626	744	1,598	4,616	6,594
	Percentage 3.1	15.7	14.9	1.4	13.5	16.2	34.5	100	
1868-72	Per Million 386	497	866	46	502	609	2,374	5,210	7,694
	Percentage 6.1	9.5	16.7	0.8	9.6	11.7	45.6	100	
1873-77	Per Million 773	868	855	84	482	629	3,161	6,852	9,174
	Percentage 11.3	12.7	12.5	1.2	7.0	9.2	46.1	100	
1878-82	Per Million 17	425	765	78	557	434	2,507	4,783	8,004
	Percentage 0.4	8.9	16.0	1.6	11.6	9.0	52.5	100	
1883-87	Per Million 13	606	820	92	518	243	1,991	4,283	6,668
	Percentage 0.3	14.2	19.3	2.1	12.0	5.7	46.4	100	
1888-92	Per Million 4	373	464	71	380	165	1,734	3,191	2,988
	Percentage 0.1	11.7	14.5	2.2	12.0	5.1	54.4	100	
1893-97	Per Million 7	460	127	72	383	156	1,235	2,440	340
	Percentage 0.3	18.8	5.2	3.0	15.7	6.4	50.6	100	
1898-02	Per Million 17	335	259	201	357	201	1,627	2,997	210
	Percentage 0.6	11.2	8.6	6.7	11.9	6.7	54.3	100	
1903-07	Per Million 5	369	125	755	279	109	1,189	2,831	820
	Percentage 0.2	13.1	4.4	26.7	9.9	3.8	41.9	100	
1908-10	Per Million 23	262	131	78	264	48	848	1,654	2,352
	Percentage 1.4	15.8	7.9	4.7	16.0	2.9	51.3	100	
(3 years)	Per Million 0	397	92	46	182	31	405	1,153	1,140
	Percentage 0.0	34.5	8.0	4.0	15.8	2.7	35.0	100	

* For the actual number of annual vaccinations and the extra vaccinations, 1863-64, see Table 50.

TABLE 44.

Being Table 21, Fourth Report, Royal Commission on Vaccination, continued to 1910.

Table showing, for the BOROUGH OF LEICESTER, during the years 1838-1910, in quinquennial periods, the average annual number of deaths and the average annual death-rate from the seven principal zymotic diseases per million living, and from six of those diseases (excluding small-pox), with the average annual registered vaccinations per 250,000 living,* and the average annual number of Sanitary Orders to abate Nuisances.

Period.		Seven Zymo- tics.	Six Zymo- tics exclud- ing Small- Pox.	Average Annual Registered Vaccinations per 250,000 Population.	Average Annual Number of Sanitary Orders.
1838-42	Average Annual Deaths Death-Rate Per Million	318 6 6,377	289 0 5,786	Not known.	No returns.
1843-47	Average Annual Deaths Death-Rate Per Million	338 6 6,186	301 4 5,506	Returns incomplete.	No returns.
1848-52	Average Annual Deaths Death-Rate Per Million	370 2 6,193	339 0 5,670	5,996	No returns.
1853-57	Average Annual Deaths Death-Rate Per Million	335 0 5,265	329 2 5,174	7,518	397
1858-62	Average Annual Deaths Death-Rate Per Million	311 4 4,616	299 6 4,441	6,084	351
1863-67	Average Annual Deaths Death-Rate Per Million	409 0 5,210	384 2 4,893	7,938*	501
1868-72	Average Annual Deaths Death-Rate Per Million	636 4 6,852	564 6 6,079	9,548	1,133
1873-77	Average Annual Deaths Death Rate Per Million	506 6 4,783	504 8 4,766	8,503	2,619
1878-82	Average Annual Deaths Death-Rate Per Million	514 2 4,283	512 6 4,270	6,613	1,882

* For the actual number of annual vaccinations and the extra vaccinations, 1863-64, see Table 50.

TABLE 44.—Continued.

Period.		Seven Zymo- tics.	Six Zymo- tics. exclud- ing Small- Pox.	Average Annual Registered Vaccinations per 250,000 Population.	Average Annual Number of Sanitary Orders.
1883-87	Average Annual Deaths	434.6	434.0	2,648	6,529
	Death-Rate Per Million	3,191	3,187		
1888-92	Average Annual Deaths	357.6	356.4	269	8,640
	Death-Rate Per Million	2,440	2,433		
1893-97	Average Annual Deaths	576.2	573.2	163	8,878
	Death-Rate Per Million	2,997	2,980		
1898-02	Average Annual Deaths	594.0	593.0	602	6,673
	Death-Rate Per Million	2,831	2,826		
1903-07	Average Annual Deaths	376.8	371.8	1,530	5,284
	Death-Rate Per Million	1,654	1,631		
1908-10 (3 years)	Average Annual Deaths	281.0	281.0	643	4,992
	Death-Rate Per Million	1,153	1,153		

TABLE 45.

Being Table 31, Royal Commission, Fourth Report, continued to 1910, but abbreviated by the exclusion of "under three months" and "under six months," these being embodied in "under one year."

Table showing, for the BOROUGH OF LEICESTER, for each of the years 1838-1910, the registered number of deaths from all causes, at all and under certain ages.

Year.	Under One Year.	Under Five Years.	Under Ten Years.	Under Fifteen Years.	Totals for All Ages.
1838	327	472	501	539	1,180
1839	382	531	579	610	1,289
1840	348	828	932	969	1,730
1841	354	579	657	706	1,358
1842	311	587	686	660	1,458
1843	328	587	625	641	1,254
1844	341	611	682	714	1,473

TABLE 45.—Continued.

Year.	Under One Year.	Under Five Years.	Under Ten Years.	Under Fifteen Years.	Totals for All Ages.
1845	461	895	986	1,019	1,689
1846	497	738	791	919	1,643
1847	410	658	695	722	1,457
1848	440	718	766	805	1,487
1849	498	814	872	908	1,689
1850	411	647	680	716	1,413
1851	482	723	778	804	1,554
1852	529	913	988	1,027	1,773
1853	483	780	828	863	1,680
1854	471	816	857	883	1,580
1855	413	605	647	668	1,498
1856	453	661	689	713	1,361
1857	537	973	1,045	1,080	1,796
1858	506	974	1,098	1,131	1,894
1859	502	863	914	944	1,638
1860	450	602	627	655	1,381
1861	530	879	945	962	1,733
1862	532	770	819	848	1,660
1863	621	1,199	1,305	1,350	2,199
1864	661	990	1,055	1,088	2,047
1865	674	1,036	1,080	1,106	1,965
1866	700	948	988	1,017	1,895
1867	792	1,090	1,122	1,153	2,065
1868	921	1,434	1,486	1,531	2,445
1869	862	1,211	1,250	1,287	2,299
1870	894	1,419	1,524	1,576	2,539
1871	964	1,361	1,430	1,460	2,498
1872	961	1,347	1,467	1,505	2,648
1873	928	1,330	1,376	1,407	2,401
1874	964	1,252	1,309	1,353	2,520
1875	1,034	1,583	1,665	1,715	2,889
1876	956	1,408	1,485	1,620	2,561
1877	897	1,255	1,312	1,341	2,515
1878	981	1,370	1,415	1,453	2,500
1879	761	1,147	1,200	1,214	2,651
1880	1,070	1,727	1,834	1,866	2,969
1881	965	1,374	1,482	1,527	2,654

TABLE 45.—Continued.

Year.	Under One Year.	Under Five Years.	Under Ten Years.	Under Fifteen Years.	Totals for All Ages.
1882	942	1,297	1,357	1,386	2,530
1883	913	1,271	1,327	1,355	2,484
1884	1,133	1,615	1,683	1,719	2,937
1885	907	1,343	1,412	1,434	2,641
1886	1,052	1,383	1,441	1,463	2,740
1887	1,011	1,407	1,465	1,489	2,736

(From 1888 to 1910 the age period of "under twenty years" is substituted for those of "under ten years," and "under fifteen years," in accordance with the later method now adopted in the official returns.)

Year.	Under One Year.	Under Five Years.	Under Twenty Years.	Totals for All Ages.
1888	980	1,335	1,466	2,668
1889	960	1,296	1,418	2,505
1890	958	1,263	1,423	2,799
1891	1,039	1,533	1,679	3,026
1892	1,150	1,658	1,853	3,250
1893	1,324	1,768	2,024	3,627
1894	971	1,301	1,467	2,730
1895	1,232	1,611	1,788	3,320
1896	1,154	1,624	1,781	3,277
1897	1,288	1,758	1,966	3,553
1898	1,181	1,703	1,899	3,480
1899	1,230	1,707	1,945	3,727
1900	1,083	1,627	1,913	3,729
1901	1,098	1,435	1,643	3,339
1902	981	1,303	1,446	3,172
1903	971	1,279	1,430	3,065
1904	964	1,255	1,414	3,266
1905	890	1,175	1,346	3,062
1906	975	1,397	1,592	3,341
1907	720	989	1,174	2,988
1908	737	1,109	1,275	3,119
1909	688	1,006	1,159	3,153
1910	680	890	1,038	2,806

TABLE 46.

Being Table 32, Royal Commission, Fourth Report, abbreviated by the exclusion of "under three months" and "under six months," these being included in "under one year," and continued to 1910.

Table showing, for the BOROUGH OF LEICESTER, for each of the years 1838-1910, the death-rate from all causes per 1,000 living, at all and under certain ages, with for each of the years 1849-1910 the percentage of registered vaccinations to births.*

Year.	Under One Year	Under Five Years.	Under Ten Years.	Under Fifteen Years.	Totals for All Ages.	Percentage of Registered Vaccinations to Total Births.
1838	6.86	9.90	10.51	11.30	24.76	Not known.
1839	7.83	10.87	11.85	12.48	26.39	
1840	6.96	16.58	18.86	19.40	34.63	
1841	6.96	11.15	12.87	13.83	26.61	
1842	6.00	11.30	12.24	12.70	28.07	
1843	6.20	11.09	11.81	12.12	23.72	Returns incomplete.
1844	6.34	11.35	12.67	13.27	27.38	
1845	8.43	16.28	17.98	18.61	30.85	
1846	8.92	13.24	14.10	16.49	29.48	
1847	7.24	11.60	12.26	12.73	25.69	
1848	7.62	12.45	13.28	13.95	25.77	—
1849	8.47	13.83	14.82	15.43	28.73	74.2
1850	6.88	10.83	11.38	11.98	23.64	55.3
1851	7.93	11.89	12.80	13.22	25.57	53.0
1852	8.61	14.85	16.07	16.70	28.84	68.6
1853	7.77	12.55	13.32	13.88	27.02	80.7
1854	7.49	13.00	13.62	14.03	25.11	92.6
1855	6.50	9.52	10.18	10.51	23.55	76.9
1856	7.05	10.29	10.72	11.09	21.16	73.7
1857	8.24	14.94	16.04	16.58	27.58	77.0
1858	7.68	14.79	16.67	17.17	28.76	88.9
1859	7.54	12.96	13.72	14.17	24.57	57.5

TABLE 46.—Continued.

Year.	Under One Year.	Under Five Years.	Under Ten Years.	Under Fifteen Years.	Totals for All Ages.	Percentage of Registered Vac- cinations to Total Births.
1860	6·67	8·92	9·29	9·71	20·47	68·9
1861	7·71	12·80	13·76	13·95	25·25	63·4
1862	7·51	10·86	11·55	11·96	23·38	50·9
1863	8·46	16·33	17·76	18·51	29·95	54·7 (140·4)*
1864	8·72	13·05	13·91	14·35	26·96	61·5
1865	8·59	13·21	13·73	14·06	25·02	36·7
1866	8·69	11·67	12·17	12·53	23·33	48·1
1867	9·44	12·99	13·37	13·73	24·59	43·2
1868	10·59	16·51	17·11	17·63	28·15	94·2
1869	9·60	13·48	13·92	14·33	25·60	94·7
1870	9·63	15·29	16·41	16·96	27·33	81·7
1871	10·06	14·20	14·93	15·25	26·07	81·1
1872	9·79	13·72	14·94	15·32	26·95	107·1
1873	9·20	13·18	13·64	23·94	23·83	83·0
1874	9·28	12·05	12·61	13·02	24·29	86·1
1875	9·76	14·94	15·72	16·20	27·28	82·6
1876	8·80	12·96	13·67	14·92	23·58	71·7
1877	8·05	11·27	11·78	12·04	23·48	76·9
1878	8·58	11·98	12·38	12·72	21·89	70·6
1879	6·49	9·79	10·24	10·36	22·64	67·0
1880	8·90	14·38	15·26	15·53	24·73	59·4
1881	7·84	11·16	12·04	12·40	21·55	72·5
1882	7·46	10·27	10·75	10·98	20·04	64·0
1883	7·05	9·82	10·25	10·45	19·18	40·9
1884	8·53	12·16	12·68	12·95	22·12	36·3
1885	6·66	9·73	10·37	10·53	19·40	39·3
1886	7·54	9·91	10·32	10·48	19·62	23·1
1887	7·06	9·83	10·23	10·40	19·10	10·0

* For the actual number of annual vaccinations and the extra vaccinations, 1863-64, see Table 50.

TABLE 46.—Continued.

(From 1888 to 1910 the age-period of "under twenty years" is substituted for those of "under ten years" and "under fifteen years," in accordance with the later method now adopted in the official returns.)

Year.	Under One Year.	Under Five Years.	Under Twenty Years.	Totals for All Ages.	Percentage of Registered Vaccinations to Total Births.
1888	6.67	9.06	9.98	17.98	6.5
1889	6.37	8.47	9.42	16.68	3.6
1890	6.20	8.11	9.22	17.79	2.8
1891	5.85	8.64	9.47	21.21	1.9
1892	6.36	9.18	10.26	18.00	2.3
1893	7.19	9.61	11.01	19.72	3.9
1894	5.18	6.93	7.83	14.57	2.2
1895	6.46	8.45	9.38	17.41	1.3
1896	5.94	8.30	9.18	16.88	1.2
1897	6.51	8.89	9.95	17.98	1.3
1898	5.87	8.46	9.44	17.29	1.4
1899	6.01	8.34	9.51	18.18	3.5
1900	5.19	7.80	9.17	17.87	7.5
1901	5.16	6.75	7.73	15.71	7.8
1902	4.22	5.47	6.68	14.70	20.8
1903	4.41	5.80	6.49	13.91	41.3
1904	4.34	5.60	6.31	14.56	21.4
1905	3.78	5.03	5.90	13.42	16.7
1906	4.20	6.02	6.86	14.39	18.3
1907	3.04	4.19	4.97	12.65	19.7
1908	3.07	4.62	5.31	12.98	11.6
1909	2.82	4.12	4.75	12.90	12.2
1910	2.73	3.58	4.18	11.29	10.5

TABLE 47.

Being Table 34, Royal Commission, Fourth Report, abbreviated by the exclusion of "under three months" and "under six months," the figures of these age-periods being included in "under one year," and continued to 1910.

Table showing, for the BOROUGH OF LEICESTER, during the years 1838-1910, in quinquennial periods, the average annual death-rate from all causes per 1,000 living, at all and under certain ages, with the average annual percentage of registered vaccinations to births.*

Period.	Under One Year.	Under Five Years.	Under Ten Years.	Under Fifteen Years.	Over Fifteen Years.	Totals for All Ages.	Annual Average Percentage of Vaccinations to Total Births.
1838-42	6.92	11.96	13.27	13.94	14.15	28.09	Not known.
1843-47	7.44	12.76	13.81	14.67	12.79	27.46	Returns incomplete.
1848-52	7.90	12.77	13.67	14.26	12.25	26.51	62.8 (4 yrs.)
1853-57	7.40	12.05	12.76	13.20	11.68	24.88	80.2
1858-62	7.42	12.06	12.99	13.39	11.09	24.48	65.9
1863-67	8.77	13.46	14.20	14.65	11.32	25.97	76.9*
1868-72	9.94	14.65	15.47	15.90	10.92	26.82	91.7
1873-77	9.00	12.85	13.49	14.02	10.47	24.49	80.1
1878-82	7.86	11.52	12.13	12.40	9.77	22.17	66.7
1883-87	7.36	10.28	10.76	10.96	8.92	19.88	29.9

(From 1888 to 1910 the age-period of "under twenty years" is substituted for those of "under ten years" and "under fifteen years," in accordance with the later method now adopted in the official returns.)

Period.	Under One Year.	Under Five Years.	Under Twenty Years.	Over Twenty Years.	Totals for All Ages.	Annual Average Percentage of Vaccinations to Total Births.
1888-92	6.29	8.69	9.67	8.67	18.34	3.4
1893-97	6.26	8.44	9.47	7.84	17.31	2.1
1898-02	5.29	7.36	8.51	8.24	16.75	8.2
1903-07	5.95	5.33	6.11	7.67	13.78	23.5
1908-10 (3 years)	2.87	4.10	4.75	7.64	12.39	11.4

* For the actual number of annual vaccinations and the extra vaccinations, 1863-64, see Table 50,

TABLE 48.

Being Table 35, Royal Commission, Fourth Report, abbreviated, and carried to 1910.

Table showing, for the BOROUGH OF LEICESTER, during the years 1838-1910, in quinquennial periods, the average annual death-rate from all causes per 1,000 living, at all and under and over certain ages, and the average annual percentage of registered vaccinations to births.*

Average Annual Death-Rate from all Causes per 1,000 Living

Period.	Under One Year.	Over One Year.	Under Five Years.	Over Five Years.	Under Ten Years.	Over Ten Years.	Under Fifteen Years.	Over Fifteen Years.	Totals for All Ages.	Average Annual Percentage of Vaccinations to Total Births.
1838-42	6·92	21·17	11·96	16·13	13·27	14·82	13·94	14·15	28·09	Not known.
1843-47	7·44	20·02	12·76	14·70	13·81	13·63	14·67	12·79	27·46	Returns incomplete.
1848-52	7·90	18·61	12·77	13·74	13·67	12·84	14·26	12·25	26·51	62·8 (4 yrs.)
1853-57	7·40	17·48	12·05	12·83	12·76	12·12	13·20	11·68	24·88	80·2
1858-62	7·42	17·06	12·06	12·42	12·99	11·49	13·39	11·09	24·48	65·9
1863-67	8·77	17·20	13·46	12·51	14·20	11·77	14·63	11·32	25·97	76·9*
1868-72	9·94	16·88	14·65	12·17	15·47	11·35	15·90	10·92	26·82	91·7
1873-77	9·01	15·48	12·83	11·64	13·49	11·00	14·02	10·47	24·49	80·0
1878-82	7·86	14·31	11·52	10·69	12·13	10·04	12·40	9·77	22·17	66·7
1883-87	7·36	12·62	10·28	9·60	10·76	9·12	10·96	8·92	19·88	29·9

TABLE 48.—Continued.

(From 1888 to 1910 the age-period of "under twenty years" is substituted for those of "under ten years" and "under fifteen years," in accordance with the later method now adopted in the official returns.)

Average Annual Death-Rate from all Causes per 1,000 Living.

Period.	Under One Year.	Over One Year	Under Five Years.	Over Five Years.	Under Twenty Years.	Over Twenty Years.	Totals for All Ages.	Average Annual Percentage of Vaccinations to Total Births.
1888-92	6.29	12.05	8.69	9.65	9.67	8.67	18.34	3.4
1893-97	6.26	11.05	8.44	8.87	9.47	7.84	17.31	2.1
1898-02	5.29	11.46	7.36	9.39	8.51	82.4	16.75	8.2
1903-07	5.95	7.83	5.33	8.45	6.11	76.7	13.78	23.5
1908-10 (3 yrs.)	2.87	9.52	4.10	8.29	4.75	76.4	12.39	11.4

* For the actual number of annual vaccinations and the extra vaccinations, 1863-64, see Table 50.

TABLE 49. (See Diagram J.)

Being Table 44, Royal Commission, Fourth Report, abbreviated by omitting the average annual number of deaths for the respective periods, but extended by the inclusion of the death-rate per 1,000 births and of those living over one year of age, and carried to 1910.

Table showing, for the BOROUGH OF LEICESTER during the years 1838-1910, in quinquennial periods, the average annual death-rate from all causes per 1,000 living at all and under and over certain ages, and the average annual percentage of registered vaccinations to births.*

TABLE 49.

Period.	Under One Year, or per 1,000 Births.	Over One Year.	Under Five Years.	Over Five Years.	Under Ten Years.	Over Ten Years.	Under Fifteen Years.	Over Fifteen Years.	Average Death-Rate at all Ages.	Average Annual Percentage of Registered Vaccinations to Births.
1838-42	177.03	22.03	90.23	18.55	52.91	19.81	39.22	21.94	28.09	Not known. Returns incomplete. 62.8 (4 years) 80.2 65.9 76.9* 91.7 80.0 66.7 29.9
1843-47	192.89	20.81	95.84	16.97	55.21	18.21	41.24	19.89	27.46	
1848-52	210.31	19.34	96.85	15.71	55.58	17.00	40.81	18.79	26.51	
1853-57	198.21	18.15	91.61	14.77	52.00	16.04	37.89	17.91	24.88	
1858-62	200.20	17.72	90.00	14.40	52.29	15.40	38.33	17.10	24.48	Not known. Returns incomplete. 62.8 (4 years) 80.2 65.9 76.9* 91.7 80.0 66.7 29.9
1863-67	212.84	17.95	99.09	14.45	56.51	15.68	41.45	17.49	25.97	
1868-72	238.85	17.62	107.31	14.09	61.02	15.18	44.53	16.95	26.82	
1873-77	211.98	15.99	94.88	13.23	53.45	14.50	39.46	15.97	24.49	
1878-82	197.24	14.90	84.57	12.32	47.64	13.44	34.52	15.23	22.17	Not known. Returns incomplete. 62.8 (4 years) 80.2 65.9 76.9* 91.7 80.0 66.7 29.9
1883-87	209.62	12.98	75.70	11.00	42.24	12.24	30.50	13.93	19.88	
1888-92†	206.5	12.73	67.05	10.20	—	Under 20 years. 23.28	—	Over 20 years. 13.62	18.34	
1893-97	196.0	11.42	69.31	10.10	—	21.01	—	14.29	17.31	
1898-1902	176.8	11.81	59.89	10.70	—	19.27	—	15.24	16.75	Not known. Returns incomplete. 62.8 (4 years) 80.2 65.9 76.9* 91.7 80.0 66.7 29.9
1903-07	153.0	10.09	43.49	9.64	—	14.39	—	13.99	13.78	
1908.10 (3 years)	127.6	9.74	33.52	9.45	—	11.18	—	13.94	12.30	

* For the actual number of annual vaccinations and the extra vaccinations for 1863-64, see Table 50.

† The calculations for the quinquennial period of 1888-92 have been made on the populations shown by the Census returns for 1881.

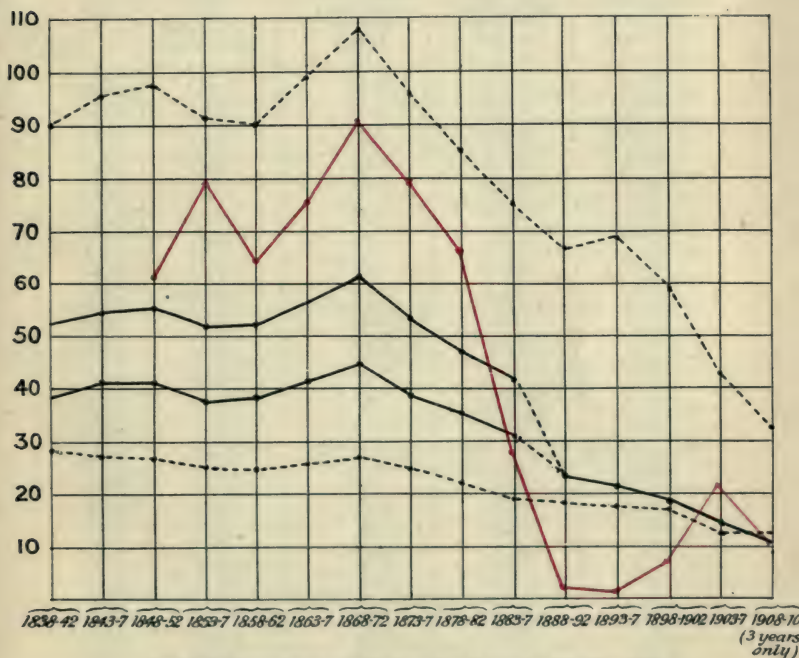
DIAGRAM J.

ILLUSTRATING TABLE 49. (See APPENDIX).

LEICESTER.

DEATH-RATES UNDER 5, 10, AND 15 YEARS,
AND AT ALL AGES.

After 1883-7, ages under 10 and 15 are merged into age under 20, as shown by dotted lines connecting solid curves.



Upper Dotted Curve—Average annual death-rate from all causes per 1000 children living under five years of age.

Upper Solid Curve—Average annual death-rate from all causes per 1000 children living under ten years of age.

Lower Solid Curve—Average annual death-rate from all causes per 1000 children living under fifteen or twenty years of age.

Lower Dotted Curve—Average annual death-rate from all causes per 1000 living at all ages.

Red Curve—Average annual percentage of vaccinations to total births.

TABLE 50.

Being Table 51, Royal Commission, Fourth Report, abbreviated, and carried to 1910.

Table showing, for the BOROUGH OF LEICESTER, for each of the years 1849-1910, the total number of registered vaccinations,* the percentage of such vaccinations to the births registered in each of the same years, and the rate to 5,000 births and to 100,000 population respectively.

Year.	Total Number of Registered Vaccinations.	Percentage of Registered Vaccinations to Total Births.	Rate of Registered Vaccinations to 5,000 Births.	Rate of Registered Vaccinations to 100,000 Population.
1849	1,613	74·2	3,710	2,736
1850	1,240	55·3	2,765	2,070
1851	1,292	53·0	2,650	2,119
1852	1,637	68·6	3,430	2,668
1853	1,843	80·7	4,036	2,964
1854	2,275	92·6	4,630	3,613
1855	1,771	76·9	3,843	2,824
1856	1,771	73·7	3,686	2,749
1857	1,880	77·0	3,851	2,888
1858	2,026	88·9	4,447	3,073
1859	1,447	57·5	2,873	2,170
1860	1,766	68·9	3,444	2,621
1861	1,614	63·4	3,172	2,350
1862	1,388	50·9	2,547	1,955
1863	1,608	54·7 (140·4)†	2,734 (7,020)†	2,187 (5,789)†
1864	1,916	61·5	3,075	2,529
1865	1,183	36·7	1,834	1,514
1866	1,641	48·1	2,405	2,018
1867	1,544	43·2	2,158	1,837
1868	3,379	94·2	4,709	3,886
1869	3,560	94·7	4,734	3,952
1870	3,103	81·7	4,084	3,351
1871	3,230	81·1	4,056	3,359
1872	4,456	107·1	5,353	4,545
1873	3,692	83·0	4,151	3,655
1874	3,764	86·1	4,303	3,651

TABLE 50.—Continued.

Year.	Total Number of Registered Vaccinations.	Percentage of Registered Vaccinations to Total Births.	Rate of Registered Vaccinations to 5,000 Births.	Rate of Registered Vaccinations to 100,000 Population.
1875	3,527	82.6	4,130	3,330
1876	3,426	71.7	3,583	3,118
1877	3,653	76.9	3,843	3,251
1878	3,372	70.6	3,528	2,934
1879	3,146	67.0	3,349	2,674
1880	2,886	59.4	2,969	2,395
1881	3,417	72.5	3,626	2,768
1882	3,106	64.0	3,198	2,454
1883	1,958	40.6	2,029	1,508
1884	1,763	36.3	1,817	1,322
1885	1,842	39.3	1,967	1,345
1886	1,122	23.1	1,158	797
1887	471	10.0	502	325
1888	314	6.5	326	213
1889	172	3.6	179	114
1890	131	2.7	135	85
1891	92	1.9	95	52
1892	133	2.3	115	74
1893	249	4.3	215	135
1894	133	2.2	110	71
1895	75	1.3	65	39
1896	77	1.4	70	40
1897	81	1.3	65	41
1898	87	1.4	71	43
1899	219	3.5	175	107
1900	466	7.5	375	223
1901	483	7.8	391	227
1902	1,313	20.8	1,040	607
1903	2,487	41.3	2,066	1,129
1904	1,282	21.4	1,072	572
1905	987	16.7	838	433
1906	1,073	18.3	915	462
1907	1,093	19.7	988	463
1908	659	11.6	580	274
1909	660	12.2	607	270
1910	564	10.5	524	227

NOTE TO TABLE 50.

* For the years given in this table, the total numbers of vaccinations have been obtained as follows:—(a) For the years 1849-62 inclusive, the number of public vaccinations performed in each year ending the 29th of September has been taken from the yearly returns made to the Poor Law Board, and an estimate made, as shown in Table 50 in the Fourth Report, of the number performed in each year ending the 31st of December. There being no official information in existence giving the actual number of private vaccinations performed in these years, one-fifth of the number of public vaccinations in each year has been taken as a fair approximation of the number of operations performed by private practitioners, and that proportion has accordingly been added to give the total number of vaccinations in each of these years (1849-62). (b) For the years 1863-67 inclusive, and for the first half of the year 1868, the total numbers of vaccinations have been abstracted from the vaccination registers, in which all vaccinations, both public and private, are entered. (c) For the last half of the year 1868, and for the years 1869-1910 inclusive, the total numbers of vaccinations represent the actual numbers (derived from the vaccination registers) of vaccinations, including both public and private, in respect of which the Vaccination Officer has received fees within those years. In 1863-64, there were 4,320 vaccinations performed by the Medical Officers to the Guardians, at the public expense, in addition to the registered number of vaccinations given for those years, the rates for which are given in brackets in the succeeding three columns. (See following note.)

† The "extra vaccinations," 1863-64.—Owing to the small-pox epidemic which prevailed there were 4,320 additional public vaccinations performed in 1863-64. This number has been arrived at as follows:—For the year ending the 29th of September, 1864, the return made to the Poor Law Board gave the number of public vaccinations performed as 5,853, while the number of current public and private vaccinations abstracted from the vaccination registers for the same period was only 1,839. One-sixth

of this latter number—namely, 306—requires deducting for the current private vaccinations, leaving 1,533 ordinary public vaccinations to be subtracted from the above abnormal number (5,853) of public vaccinations. The remainder (4,320) is therefore the number of public “extra vaccinations” for the period mentioned. No addition has been made for any extra private vaccinations which may have occurred.—J. T. B.

TABLE 51.

Being Table 48, Royal Commission, Fourth Report, and continued to 1910.

Table showing, for the BOROUGH OF LEICESTER, during the years 1849-1910, in quinquennial periods, the total number of deaths from small-pox, and from all causes, of children under five, and under fifteen (or twenty) years of age, and the proportion of the deaths at those ages from small-pox, percentage of the deaths at the same ages from all causes, with the average annual percentage of registered vaccinations to births.*

Period	Under Five Years.	Under Fifteen (or Twenty) Years †	Average Annual Percentage of Registered Vaccinations to Total Births.
1849-52 (4 years)	$\frac{98}{3,097} = 3.16$	$\frac{116}{3,455} = 3.36$	62.8
1853-57	$\frac{19}{3,835} = 0.50$	$\frac{22}{4,207} = 0.52$	80.2
1858-62	$\frac{37}{4,106} = 0.90$	$\frac{45}{4,540} = 0.99$	65.9

* For the actual number of annual vaccinations and the extra vaccinations, 1863-64, see Table 50.

† Since 1887 it has been impossible to obtain the figures for deaths from fevers under fifteen years, and from that date onwards it has, therefore, been necessary to raise the age from “under fifteen” to “under twenty.”

TABLE 51.—Continued.

Period.	Under Five Years.	Under Fifteen (or Twenty) Years.†	Average Annual Percentage of Registered Vaccinations to Total Births.
1863-67	$\frac{78}{5,263} = 1.48$	$\frac{100}{5,714} = 1.75$	76.9*
1868-72	$\frac{118}{6,772} = 1.74$	$\frac{205}{7,357} = 2.78$	91.7
1873-77	$\frac{4}{6,828} = 0.06$	$\frac{5}{7,436} = 0.07$	80.0
1878-82	$\frac{2}{6,915} = 0.03$	$\frac{4}{7,446} = 0.05$	66.7
1883-87	$\frac{1}{7,019} = 0.01$	$\frac{2}{7,460} = 0.03$	29.9
1888-92	$\frac{2}{7,026} = 0.03$	$\frac{4}{7,941} = 0.05$	3.4
1893-97	$\frac{7}{8,062} = 0.08$	$\frac{12}{9,026} = 0.13$	2.1
1898-02	$\frac{0}{6,472} = 0.00$	$\frac{0}{7,399} = 0.00$	8.2
1903-07	$\frac{5}{6,068} = 0.08$	$\frac{14}{6,929} = 0.20$	23.5
1908-10 (3 years)	$\frac{0}{3,005} = 0.00$	$\frac{0}{3,482} = 0.00$	11.4

TABLE 52.

Being Table 49, Royal Commission, Fourth Report, carried to 1910.

* Table showing, for the BOROUGH OF LEICESTER, during the years 1838-1910, in quinquennial periods, the total number of deaths at all ages from small-pox, from fevers, from the seven principal zymotic diseases, and from all causes, and the proportion of the deaths from small-pox, from fevers, and from the seven principal

zymotic diseases, per cent. of the deaths from all causes, with the average annual percentage of registered vaccinations to births.†

TABLE 52.

Period.	Percentage Deaths from Small-Pox.	Percentage of Deaths from Fevers (Typhus, Typhoid, and Simple Fever).	Percentage of Deaths from the Seven Zymotics.	Average Annual Percentage of Registered Vaccinations to Total Births.
1838-42	$\frac{148}{7,015} = 2.11$	$\frac{382}{7,015} = 5.44$	$\frac{1,593}{7,015} = 22.70$	Not known.
1843-47	$\frac{186}{7,516} = 2.47$	$\frac{345}{7,516} = 4.59$	$\frac{1,693}{7,516} = 22.52$	Returns incomplete.
1848-52	$\frac{156}{7,916} = 1.97$	$\frac{404}{7,916} = 5.10$	$\frac{1,851}{7,916} = 23.38$	62.8 (4 years)
1853-57	$\frac{29}{7,915} = 0.36$	$\frac{403}{7,915} = 5.09$	$\frac{1,675}{7,915} = 21.16$	80.2
1858-62	$\frac{59}{8,306} = 0.71$	$\frac{251}{8,306} = 3.02$	$\frac{1,557}{8,306} = 18.74$	65.9
1863-67	$\frac{124}{10,171} = 1.22$	$\frac{239}{10,171} = 2.35$	$\frac{2,045}{10,171} = 20.10$	76.9†
1868-72	$\frac{359}{12,429} = 2.88$	$\frac{292}{12,429} = 2.35$	$\frac{3,182}{12,429} = 25.60$	91.7
1873-77	$\frac{9}{12,886} = 0.07$	$\frac{230}{12,886} = 1.78$	$\frac{2,532}{12,886} = 19.65$	80.0
1878-82	$\frac{8}{13,304} = 0.06$	$\frac{146}{13,304} = 1.09$	$\frac{2,571}{13,304} = 19.32$	66.7
1883-87	$\frac{3}{13,538} = 0.02$	$\frac{112}{13,538} = 0.83$	$\frac{2,173}{13,538} = 16.05$	29.9
1888-92	$\frac{6}{14,228} = 0.4$	$\frac{124}{14,228} = 0.88$	$\frac{1,788}{14,228} = 12.34$	3.4
1893-97	$\frac{15}{16,507} = 0.8$	$\frac{190}{16,507} = 1.14$	$\frac{2,781}{16,507} = 17.24$	2.1
1898-02	$\frac{5}{17,447} = 0.3$	$\frac{113}{17,447} = 0.63$	$\frac{2,970}{17,447} = 16.82$	8.2

TABLE 52.—Continued.

Period.	Percentage of Deaths from Small-Pox.	Percentage of Deaths from Fevers (Typhus, Typhoid, and Simple Fever).	Percentage of Deaths from the Seven Zymotics.	Average Annual Percentage of Registered Vaccinations to Total Births.
1903-07	$\frac{25}{15,722} = 0.16$	$\frac{55}{15,722} = 0.34$	$\frac{1,884}{15,722} = 11.86$	23.5
1908-10 (3 years)	$\frac{0}{9,078} = 0.00$	$\frac{23}{9,078} = 0.25$	$\frac{843}{9,078} = 9.1$	11.4

* In this table the numerators of the fractions give the number of deaths from the specified diseases at all ages, and the denominators the deaths from all causes at all ages.

† For the actual number of annual vaccinations and the extra vaccinations, 1863-64, see Table 50.

TABLE 53.

Being Table 50, Royal Commission, Fourth Report, carried to 1910.

* Table showing, for the BOROUGH OF LEICESTER, during the years 1838-1910, in quinquennial periods, the total number of deaths from all causes of children under five and under fifteen (or twenty) years of age, and of persons at all ages, and the proportion of such deaths under five and under fifteen (or twenty) years, per cent. of those at all ages, with the average annual percentage of registered vaccinations to births.†

Period.	Under Five Years.	Under Fifteen (or Twenty) Years.†	Average Annual Percentage of Registered Vaccinations to Total Births.
1838-42	$\frac{2,997}{7,015} = 42.72$	$\frac{3,484}{7,015} = 49.66$	Not known.
1843-47	$\frac{3,489}{7,516} = 46.42$	$\frac{4,015}{7,516} = 53.42$	Returns incomplete.

TABLE 53.—Continued.

Period.	Under Five Years.	Under Fifteen (or Twenty) Years.†	Average Annual Percentage of Registered Vaccinations to Total Births.
1848-52	$\frac{3,815}{7,916} = 48.19$	$\frac{4,260}{7,916} = 53.81$	62.8 (4 yrs.)
1853-57	$\frac{3,835}{7,915} = 48.45$	$\frac{4,207}{7,915} = 53.15$	80.2
1858-62	$\frac{4,106}{8,306} = 49.43$	$\frac{4,540}{8,306} = 54.66$	65.9
1863-67	$\frac{5,263}{10,171} = 51.74$	$\frac{5,714}{10,171} = 56.18$	76.9†
1868-72	$\frac{6,772}{12,429} = 54.48$	$\frac{7,357}{12,429} = 59.19$	91.7
1873-77	$\frac{6,828}{12,886} = 52.98$	$\frac{7,436}{12,886} = 57.70$	80.0
1878-82	$\frac{6,915}{13,304} = 51.97$	$\frac{7,446}{13,304} = 55.96$	66.7
1883-87	$\frac{7,019}{13,538} = 51.83$	$\frac{7,460}{13,538} = 55.10$	29.9
1888-92	$\frac{7,085}{14,248} = 49.73$	$\frac{7,839}{14,248} = 55.02+$	3.4
1893-97	$\frac{8,062}{16,507} = 48.84$	$\frac{9,026}{16,507} = 54.68$	2.1
1898-02	$\frac{7,775}{17,447} = 44.56$	$\frac{8,846}{17,447} = 50.70$	8.2
1903-07	$\frac{6,095}{15,722} = 38.77$	$\frac{6,956}{15,722} = 44.24$	23.5
1908-10 (3 years)	$\frac{3,005}{9,078} = 33.10$	$\frac{3,472}{9,078} = 38.25$	11.4

* In this table the numerators of the fractions give the number of deaths from all causes, at the ages under

NOTES TO TABLE 53.—Continued.

five and under fifteen (or twenty) years, and the denominators the deaths from all causes at all ages.

† For the actual number of annual vaccinations and the extra vaccinations, 1863-64, see Table 50.

‡ Since 1887 it has been impossible to obtain the figures for deaths under fifteen years, and from that date onwards it has, therefore, been necessary to raise the age from "under fifteen" to "under twenty."

PARLIAMENTARY RETURN, 25TH FEBRUARY, 1880.

(Mr. Hopwood.)

TABLE 54.

"A."

Return of the average annual death-rate at all ages, from all causes, per 1,000,000 of estimated population, at different periods.

PERIODS.	Average Annual Death-Rate (All Ages and Causes per Million of Population.
16 years, 1838 to 1853 . . .	22,386
12 years, 1838 to 1853, excluding 1846 to 1849 (Cholera period) . . .	21,840
23 years, 1854 to 1877 . . .	22,141
9 years, 1868 to 1877 . . .	21,847

"B."

Return of the (1) proportional number of deaths of children under one year of age from certain causes, and from all causes, per 1,000,000 births; and (2) proportional number of deaths of children aged one and under five years of age from certain causes, and from all causes, per 1,000,000 deaths, at all ages and from all causes.

TABLE 54 ("B").

Deaths under One Year per Million of Births, and between One and Five Years per Million of Deaths (All Ages and Causes).				
CAUSES.	1847		1877	
	Under One to Births.	One to Five to Total Deaths (All Ages and Causes).	Under One to Births.	One to Five to Total Deaths (All Ages and Causes).
Syphilis	472	69	1,746	342
Scrofula	335	739	1,105	2,054
Tabes Mesenterica	3,008	4,820	4,192	5,702
Skin Disease	156	36	437	184
Erysipelas	732	409	826	196
Bronchitis	4,641	5,651	16,121	19,614
Diarrhœa	9,525	6,240	10,512	5,792
Atrophy and Debility (including Premature Birth)	36,266	6,686	34,683	5,413
TOTAL, Eight Causes	55,135	24,650	69,622	39,297
All other Causes	109,290	141,704	66,403	112,067
All Causes	164,425	166,354	136,025	151,364

"C."

Return of the (1) proportional number of deaths at all ages from Small-Pox, per 1,000,000 of estimated population. 1847-53 and 1868-77, and (2) proportion per cent. of deaths of children under five years of age from Small-Pox to total deaths at all ages from that disease

Periods prior and subsequently to Enforced Vaccination	Annual Average.	
	Proportion of Deaths from Small-Pox (All Ages) per Million of Population.	Proportion per Cent. of Deaths from Small-Pox under Five Years to Deaths (All Ages) from that Disease
1847 to 1853 inclusive	305	69.7
1868 to 1877 inclusive	261	32.9

NOTE TO TABLE 54 ("C").

Note.—During the twelve years 1838-42 and 1847-53 (the only years prior to compulsory vaccination for which these mortality statistics are available), the average annual death-rate from Small-Pox was equal to 420 per 1,000,000 persons living; whereas in the twenty-five years (1854-78) of compulsory vaccination, the annual death-rate from this disease has not averaged more than 216 per 1,000,000, notwithstanding the exceptionally fatal epidemic of 1871-72.

PARLIAMENTARY RETURN, 13TH AUGUST, 1888.

(Mr. Channing.)

TABLE 55.

"D."

Proportion per cent. of deaths from Small-Pox at each of the following ages, to total at all ages from that disease.

Years	Proportion per Cent. of Deaths from Small-Pox to Total from that Disease.			
	Under One Year.	One and under Two.	Two and under Five.	Five and under Ten.
1879	11·6	3·0	9·7	11·9
1880	12·0	3·5	10·6	11·7
1881	10·3	4·0	9·6	10·9
1882	9·8	3·5	7·6	7·7
1883	13·2	2·7	7·7	9·5
1884	11·4	3·8	7·8	9·2
1885	12·1	3·7	8·8	7·9
1886	11·3	2·5	5·5	6·5

TABLE 55.—Continued.

“ E.”

Deaths of infants under one year of age, per million births, from each of the following causes.

Deaths of Infants under One Year per Million Births.

Year.	Sy- philis.	Scro- fula.*	Tabes Mesen- terica.	Skin Dis- eases †	Erys- ipelas	Pyæ- mia and Phleg- mon.	Bron- chitis.	Diarr- hoea and Dysen- tery.	Atrophy and Debility (includ- ing Pre- mature Birth).	Total Nine Causes	All other Causes.
1879	1,696	1,017	4,049	382	677	216	19,813	7,406	85,777	71,013	64,441
1880	1,802	1,347	5,240	858	738	262	17,910	21,072	38,072	86,801	65,966
1881	1,743	1,019	4,230	429	792	162	15,961	10,647	84,946	69,929	60,187
1882	1,874	1,100	4,638	603	819	148	18,586	12,013	85,863	75,544	65,084
1883	1,991	1,098	4,276	450	777	166	17,789	11,184	37,410	75,141	62,060
1884	1,911	1,287	4,722	536	786	163	16,919	19,584	37,780	83,034	63,185
1885	1,847	1,346	3,906	461	697	150	19,539	9,864	85,569	73,379	64,309
1886	1,832	1,509	4,988	490	523	148	18,291	18,270	38,126	84,177	65,038

* With Scrofula are included all Tubercular Diseases other than Phthisis Pulmonalis, Tabes Mesenterica, and Tubercular Meningitis.

† Since 1881, inclusively, Erythema has been included with Skin Diseases, which was not the case previously. The rates, therefore, from 1881 are not strictly comparable with previous rates.

PARLIAMENTARY RETURN, 22ND MARCH, 1912.

(Mr. Ramsay Macdonald.)

TABLE 56.

DEATHS (ENGLAND AND WALES).

Return for each year from 1887-1910, inclusive, England and Wales.

“ F.”

Number of deaths from Small-Pox at each of the following ages, the death-rate per million births or per million living, and proportion per cent. of deaths of these ages to total at all ages from that disease.

TABLE 56—"F."

Year.	Under One Year.			One and under Two.			Two and under Five.			Five and under Ten.			Ten and All Higher Ages.			Year.
	Num- ber of Deaths.	Deaths per Million at All Ages.	Percent- age of Total Deaths at All Ages.	Num- ber of Deaths.	Deaths per Million Living.	Percent- age of Total Deaths at All Ages.	Num- ber of Deaths.	Deaths per Million Living.*	Percent- age of Total Deaths at All Ages.	Num- ber of Deaths.	Deaths per Million Living.*	Percent- age of Total Deaths at All Ages.	Num- ber of Deaths.	Deaths per Million Living.*	Percent- age of Total Deaths at All Ages.	
1887	61	69	12.1	13	19	2.6	24	11	4.7	31	9	6.1	377	18	74.5	1887
1888	122	139	11.9	21	30	2.0	62	29	6.0	65	19	6.3	756	35	73.8	1888
1889	2	2	8.7	1	1	4.3	—	—	—	—	—	—	20	1	87.0	1889
1890	3	3	18.8	1	1	6.8	—	—	—	—	—	—	12	1	74.9	1890
1891	12	13	24.5	1	1	2.0	4	2	8.2	3	1	6.1	29	1	59.2	1891
1892	50	66	11.6	24	34	5.6	40	19	9.3	98	10	7.7	284	13	65.8	1892
1893	192	210	13.2	61	87	4.2	181	62	9.0	90	26	6.2	983	43	67.4	1893
1894	115	129	14.0	33	47	4.0	76	36	9.3	37	11	4.5	559	24	68.2	1894
1895	84	97	15.2	7	10	3.1	22	10	9.9	14	4	6.3	146	6	65.6	1895
1896	73	80	13.5	25	35	4.6	102	47	13.9	112	32	20.7	229	10	42.3	1896
1897	3	3	12.0	3	4	12.0	2	1	8.0	2	1	8.0	15	1	60.0	1897
1898	9	10	3.6	—	—	—	11	5	4.3	26	8	10.3	207	8	31.8	1898
1899	12	13	6.9	9	12	5.3	7	8	4.0	7	2	4.0	139	6	79.9	1899
1900	8	8	3.5	1	1	1.2	8	4	9.4	4	1	4.7	69	3	31.2	1900
1901	27	29	7.6	9	13	2.5	23	10	6.5	26	7	7.3	271	11	76.1	1901
1902	232	236	9.0	75	102	3.9	220	99	8.9	167	47	6.8	1,780	69	72.3	1902
1903	34	39	11.1	17	23	2.2	32	14	4.2	37	10	4.9	590	23	77.6	1903
1904	74	78	14.6	10	13	2.0	23	10	4.5	26	7	5.1	374	14	73.8	1904
1905	11	12	9.5	1	1	0.9	5	2	4.3	3	1	2.6	96	4	32.7	1905
1906	4	4	19.0	—	—	—	—	—	—	—	—	—	17	1	31.0	1906
1907	—	—	—	—	—	—	1	0	10.0	—	—	—	9	0	90.0	1907
1908	1	1	8.3	—	—	—	—	—	—	1	0	8.3	10	0	33.4	1908
1909	1	1	4.8	—	—	—	—	—	—	2	1	9.5	13	1	35.7	1909
1910	1	1	5.3	—	—	—	1	0	5.3	1	0	5.3	16	1	34.1	1910

* In these columns "0" indicates that the deaths were too few to give a rate of 0.5 per million.

TABLE 56—"G."

Deaths of infants under one year of age, per million births, from each of the following causes —

Deaths of Infants under One Year per Million Births.

Year	Syphilis	Scrofula*	Tuberculous Peritonitis and Tubes Mesenterica	Skin Diseases†	Erysipelas	Pyæmia and Phlegmon.‡	Bronchitis.	Diarrhoea§	Atrophy and Debility (including Pre-mature Birth).	Total Nine Causes.	Total All Causes
1887	1,787	1,468	4,299	520	608	153	18,103	16,175	37,298	80,411	144,728
1888	1,650	1,449	4,004	522	598	170	18,608	9,453	86,915	73,379	136,474
1889	1,693	1,569	4,410	529	444	135	18,193	14,020	97,309	78,332	143,573
1890	1,700	1,614	4,651	544	453	182	19,807	13,558	39,196	81,705	150,584
1891	1,490	1,658	4,034	497	386	150	21,434	10,064	39,353	79,666	148,553
1892	1,550	1,602	3,982	560	472	169	19,198	11,679	39,774	79,046	147,516
1893	1,680	1,646	4,707	617	524	239	15,806	22,668	41,787	89,664	158,611
1894	1,630	1,505	3,308	567	427	195	17,887	8,267	36,821	76,607	136,808
1895	1,610	1,695	4,180	598	377	216	17,107	21,226	41,671	88,680	160,571
1896	1,390	1,299	3,974	574	359	216	16,204	14,265	39,075	76,756	147,592
1897	1,390	1,337	3,513	532	307	214	15,174	21,947	39,689	84,103	155,790
1898	1,300	1,429	3,537	553	265	185	14,134	24,590	40,511	86,504	160,332
1899	1,290	1,287	3,454	522	351	222	14,222	25,488	40,577	87,413	162,575
1900	1,240	1,386	3,124	625	348	248	14,846	19,027	40,505	81,849	154,156
1901	1,280	1,215	3,202	553	301	273	12,577	24,584	40,059	83,994	151,266
1902	1,190	1,255	2,593	533	296	258	12,706	19,553	37,339	67,399	132,903
1903	1,340	1,312	2,657	550	283	268	11,381	13,707	37,611	69,109	131,921
1904	1,300	1,322	2,696	533	316	238	11,306	23,985	38,321	80,917	145,329
1905	1,340	1,113	2,170	626	290	277	10,090	16,764	36,670	69,340	128,152
1906	1,280	1,002	2,050	565	280	253	8,450	24,267	36,460	74,697	132,497
1907	1,230	983	1,710	602	230	264	10,750	8,322	34,860	58,951	117,615
1908	1,250	985	1,830	546	230	224	9,320	14,307	34,820	63,512	120,434
1909	1,220	771	1,590	517	280	237	8,390	7,919	34,360	55,234	108,729
1910	1,150	658	1,550	479	170	221	7,900	7,926	32,960	53,014	105,440

* With scrofula are included all tuberculous diseases other than pulmonary tuberculosis, phthisis (not otherwise defined), tuberculous meningitis, tuberculous peritonitis, tuberculous mesenterica, and lupus.

† Including lupus, but excluding carbuncle, which is now classed with phlegmon.

LIST OF STATISTICAL TABLES.

-
1. Erysipelas death-rates in quadrennial periods—Leicester, 1874-1909. (See Diagram A.) Pp. 176-7.
 2. Registrar-General's annual return of deaths from "Cow-Pox and other effects of Vaccination"—England and Wales, 1859-1910. Pp. 184-5.
 3. Small-Pox death-rate, per million living, in Leicester, 1838-1910; and Sanitary Orders, 1853-1910. Pp. 190-1.
 4. Epidemics of Small-Pox in Leicester, 1871-73, 1892-94, and 1902-04. P. 193.
 5. Importations, Cases, Deaths, and Fatality of Small-Pox in Leicester, 1874-1910. P. 195.
 6. Percentage of deaths at certain ages from Small-Pox and Fevers to the deaths at all ages from those diseases, in Leicester, from 1849-1910. Pp. 204-5.
 7. Children's share of fatality from Small-Pox, Typhus, and Typhoid Fever—England and Wales, 1871-90. P. 206.
 8. Relative percentage of deaths from each of the seven principal zymotic diseases to the total deaths from all of them—Leicester, 1838-89. P. 212.
 9. Relative percentage of deaths from each of the seven principal zymotic diseases to the total deaths from all of them—Leicester, 1890-1910. P. 212.
 10. Relative percentage of deaths from Small-Pox and Fevers, to the total deaths from the seven principal zymotic diseases, with the average annual death-rate from Small-Pox and Fevers, per million, in Leicester, 1838-89 and 1890-1910. P. 213.
 11. Number and relative percentage of the "protected" and "unprotected" population at various periods of vaccinal "protection" in Leicester, 1849-1910. P. 221.
 12. Percentage of Cicatrices in mild and confluent Small-Pox cases—Leicester epidemic, 1892-94. P. 232.

13. Death-rate of infants per 1,000 births, and from Diarrhœa per million population, in Leicester, 1838-1910. Pp. 236-7.
14. Percentage of Vaccinations and Diarrhœa death-rate, per million living, in Leicester, compared in two periods, 1868-75 and 1888-95. P. 238.
15. Marriage, Birth, and Death rates, per 1,000 population, in Leicester, 1838-1910. (See Diagram B.) P. 246.
16. Leicester Small-Pox cases, deaths, and fatality, compared with other towns, 1892-94. P. 248.
17. London Small-Pox cases, deaths, and fatality, from Metropolitan Asylums Board's Reports, 1870-1902. P. 260.
18. Pre-Jennerian Small-Pox cases, deaths, and death-rate, 1746-79. P. 261.
19. Post-Jennerian Small-Pox cases, deaths, and fatality per cent., for the United Kingdom, Europe, and America, 1802-85. P. 261.
20. Comparisons of Small-Pox fatality, in the Eighteenth, Nineteenth, and commencement of the Twentieth Centuries, 1746-1904. Pp. 262-3.
21. Small-Pox cases, deaths, and fatality, in Japan, the British Army and Navy, and Leicester, at varying periods from 1860-1908. (See Diagram C.) P. 291.
22. Death-rates of Leicester, London, Great Towns, and England and Wales compared, 1868-1910. P. 292.
23. Death-rates, for the year 1910 only, in England and Wales, 77 great towns, 136 smaller towns, the rural districts of England and Wales, and Leicester, compared. P. 293.
24. Births, Vaccinations, and Exemptions in Leicester, 1899-1911. P. 322.
25. Small-Pox cases, Quarantines, and Cost, 1874-89. Pp. 478-9.
26. Detailed cost of Quarantine, 1892-1906. P. 483.

27. Small-Pox cases, Quarantines, and Cost, 1890-1910. Pp. 483-4.
28. Persons vaccinated whilst in Quarantine, 1886-88. P. 486.
29. Small - Pox Epidemics, cost, and fatality - rates compared, for London, Glasgow, Sheffield, and Leicester, 1887-1904. P. 492.
30. Death-rate from Syphilis and Erysipelas, for children under one, per million births, in Leicester, 1882-93. P. 516.
31. Death-rate from Syphilis, under one, per million births, in Leicester, and England and Wales, compared, 1888-1910. P. 518.
32. Dr. Ogle's Table C, p. 646, Sixth Report, Royal Commission. P. 524.
33. Deaths at Leicester from diseases referred to in Dr. Ogle's Table C. P. 527.
34. Errors in Dr. Ogle's Table C. P. 528.
35. Death-rate from Syphilis, Scrofula, Tuberculous Peritonitis, Skin Diseases, Erysipelas, Pyæmia, Bronchitis, Diarrhœa, and Atrophy ; also all other causes, per million births, in England and Wales, 1847-1910. (See Diagram D.) P. 577.
36. London Diphtheria fatality, and Anti-Toxin, from Metropolitan Asylums Board's Reports, 1895-1910. (See Diagram E.) P. 639.
37. Diphtheria death-rate, per million population, for Leicester, London, and England and Wales, 1868-1910. P. 643.
38. Diphtheria deaths and death-rates, in Leicester, 1838-1910. (See Diagram F.) P. 647.
39. Diphtheria cases, deaths, and case fatality, in Leicester, before and after the introduction of Anti-Toxin, 1880-1910. Pp. 649, 650.
40. Diphtheria cases, deaths, and fatality, in two separate periods, in Leicester, 1880-94 and 1895-1909. P. 651.

TABLES IN APPENDIX.

-
41. Annual number of deaths from each of the seven principal zymotic diseases, in Leicester, 1838-1910. Pp. 718-720.
 42. Annual death-rate from each of the seven principal zymotics, per million living, in Leicester, 1838-1910. (See Diagram G.) Pp. 720-722.
 43. Death-rate from each of the seven principal zymotic diseases, per million living, in Leicester, and the percentage of deaths from each, to all of them, 1838-1910. (See Diagram H.) P. 723.
 44. Deaths and death-rates from six and seven principal zymotics, in Leicester, 1838-1910; and Sanitary Orders, 1853-1910. Pp. 724, 725.
 45. Annual number of deaths in Leicester, at all and under certain ages, 1838-1910. Pp. 725-727.
 46. Annual death-rate in Leicester from all causes, at all and under certain ages, 1838-1910. Pp. 728-730.
 47. Annual average death-rate, in quinquennial periods, from all causes, under and over certain ages, and at all ages, in Leicester, 1838-1910. P. 731.
 48. Annual average death-rate in Leicester from all causes, under and over certain ages, and at all ages, 1838-1910, with the percentage of vaccinations to births, 1849-1910. Pp. 732, 733.
 49. Death-rate under and over certain ages, and at all ages, 1838-1910. (See Diagram J.) P. 734.
 50. Annual number, percentage, and rates of Vaccination, in Leicester, 1849-1910. Pp. 735, 736.
 51. Percentage of deaths in Leicester from Small-Pox to those from all causes, at certain ages, in quinquennial periods, 1838-1910. Pp. 738, 739.
 52. Percentage of deaths from Small-Pox, Fevers, and the seven principal zymotics to total deaths from all causes, in Leicester, 1838-1910. Pp. 740, 741.
 53. Percentage of deaths under certain ages to total deaths at all ages, in Leicester, 1838-1910. Pp. 741, 742.

54. Parliamentary Return of deaths from Small-Pox, Syphilis, and other diseases. (Moved for by Mr. C. H. Hopwood, 1880.) Pp. 743, 744.
55. Parliamentary Return of deaths from Small-Pox, Syphilis, and other diseases. (Moved for by Mr. F. Channing, 1888.) Pp. 745, 746.
56. Parliamentary Return of deaths from Small-Pox, Syphilis, and other diseases. (Moved for by Mr. J. R. Macdonald, 1912.) Pp. 746-748.

TABLE OF DIAGRAMS.

- Diagram A. Erysipelas in Leicester. Illustrating Table 1. Pp. 176, 177.
- „ B. Marriage, Birth, and Death rates in Leicester. Illustrating Table 15. P. 246.
- „ C. Small-Pox fatalities in Japan, British Army and Navy, and Leicester, compared. Illustrating Table 21. P. 291.
- „ D. Death-rates from Syphilis and other inoculable diseases, per million—England and Wales. Illustrating Table 35. P. 577.
- „ E. Diphtheria death-rates in Leicester, London, and England and Wales. Illustrating Table 36. P. 639.
- „ F. Diphtheria in Leicester. Illustrating Table 38. P. 647.
- „ G. Annual death-rate from Small-Pox, per million, In Leicester. Illustrating Table 42. (See Appendix, p. 720.)
- „ H. Death-rate, per million, from each of seven principal zymotics, with the percentage of vaccinations to births, in quinquennial periods—Leicester, 1838-1910. Illustrating Table 43. (See Appendix, p. 723.)
- „ J. Death-rates at various ages in Leicester. Illustrating Table 49. (See Appendix, p. 734.)

BOROUGH OF LEICESTER.

SUMMARY OF VITAL STATISTICS FOR YEAR 1911.

The figures for the year 1911 were published too late to be embodied in my tables. Had this been possible, they would rather have improved them than otherwise, as they show that Leicester is keeping well to the fore in comparison with other towns.

Population at Census	At mid-year (estimated)
- - 227,242 ...	- - 227,634
Marriages - - 1,891 ...	Marriage-rate - - 16.61
Births - - 5,222 ...	Birth-rate - - 22.94
Deaths (corrected) - 3,051 ...	Death-rate - - 13.40

OTHER DEATH-RATES.

Zymotic - - - 1.41	Diarrhœa - - - .73
Respiratory - - 1.76	Cancer - - - 1.03
Tuberculosis - - 1.55	Phthisis - - - 1.26
Infant mortality (per 1,000 births) - 130.0	

COMPARISON WITH LEICESTER.

77 Great Towns.	Leicester.
Birth-rate - - - 25.5	Birth-rate - - - 22.9
Death-rate - - - 15.5	Death-rate - - - 13.4
Infant mortality - 141.0	Infant mortality - 130.0

OTHER DETAILS FOR 1911.

Area of Borough (in acres) - - - -	8,582½
Number of persons per acre at Census, 1911 - -	26. 4
Number of persons per tenement at Census - -	4.41
Number of inhabited tenements at Census - -	51,481
Number of empty houses, shops, warehouses, etc. (July) - - - -	1,751
Rateable value (1st November, 1911) - - -	£1,104,111
Poor Rate, 1911-12 - - - -	1s. 10d.
General District Rate - - - -	5s. 9½d.

The figures used in this book have been abstracted from the following official and authoritative sources:—Parliamentary Returns; the Registrar-General's Annual Reports; the Reports of the Royal Commission on Vaccination; the Annual Reports of the Metropolitan Asylums Board; and the Annual Reports of the Medical Officers of Health for Leicester.

INDEX.

- A One-Sided Inquiry, 302, 303.
 Abbey Park, Leicester, 44, 48.
 Abercromby, Dr. Alexander, on
 Transmission of Leprosy, 553.
 Acland, Dr., and Calf "Lymph,"
 593.
 A.D. 52-1912, 17-70.
 Adelaide, Queen, 43.
 Advantages of the "Leicester
 Method," 461-514.
 Agricola, Julius, 19.
 Airy, Dr.: Vaccinal Injury,
 180.
 Albinus, Clodius, Roman Em-
 peror, 21.
 Alexandra, Queen, 44.
 Alfred the Great, King, 24.
 Algar, Saxon Earl of Leicester
 and Duke of Mercia, 26, 27.
 Algeria, Syphilisation of Sol-
 diers in, 542.
 Algetha (Swan-necked Queen),
 27, 28.
 Allbutt, Sir Clifford, on Tuber-
 culin Dispensaries, 676.
 Allectus, Roman Emperor, 21.
 American Evidence against
 Anti-Toxin, 635-637.
 American Small-Pox, 261.
 "Anaphylaxis," 686-696.
 Ancient Charters of Leicester,
 53, 54.
 Andersen, Mr. W. L., on "The
 Great White Plague," 555,
 566, 663, 664.
 Anderson, Mrs. Dr. Garrett, on
 Vaccination, 75, 76.
 Animal "Lymph," Dangers of,
 586-590.
 Animal Vaccine Station, 597.
 Animal Virus, Dangers of, 586,
 590.
 Anne, Queen, 43.
 Annett, Professor H. E., and
 Tuberculosis, 662.
 Annual Congress of Sanitary
 Institute at Leicester, 709,
 710.
 Annual Meeting of British
 Medical Association at Lei-
 ceater, 710, 711.
 "Annual Register" of 1762, 361.
 Anti-Compulsory Vaccination
 League Circular, 583.
 Antigone's Noble Protest for
 Liberty, 366, 367.
 Anti-Toxin: Case Fatality—
 Berlin, 636; Paris, 637; Lon-
 don, 638-642; Leicester, 646-
 654; Japan, 652.
 Anti-Toxin and Diphtheria, 650-
 654.
 Anti-Toxin, What is, 655-659;
 Foreign Evidence against,
 635-637; American, 635;
 Continental, 635; London,
 638-642; Registrar-General,
 643-645; Leicester, 646-654;
 Japan, 652.
 "Anti-Vaccinator," The: House
 of Lords, 78; "Franco-Ger-
 man Army Statistic," 614.
 Antommarchi, Dr., "Last
 Days of Napoleon," 360.

- Appendix: Tables 41-56 and Diagrams G, H, and J, 718-748.
- Archbishops of Canterbury and Leicester, 22, 23.
- "Archives of Surgery," Vaccino-Syphilis, 544-547.
- Area of Leicester, 68.
- Armada, the Invincible, 47.
- Armies, European: Vaccination and Tuberculosis, 568.
- Army, Small-Pox in British, and Leicester, Table 21 and Diagram C, 290, 291.
- Arnold, Arthur (M.P. for Salford), 86.
- Art Gallery, 69.
- Art of Healing, 715.
- Ashbury, Mr., M.P., on Small-Pox at Ceara, 612, 613.
- Askey, Mr. F. D., 123.
- Asquith, Mr. H. H., appears for Leicester Guardians, 334.
- Aston Manor Small-Pox compared with Leicester, 248-458.
- Attachment, Writ of, for Leicester Guardians, 341, 342.
- Atrophy: Table 35 and Diagram D, 577; and Tables 54, 55, and 56, Appendix, 743-748.
- Bacon, Lord, and the Plague, 360.
- Bahadurjee, Dr., on Vaccination and Leprosy, 553.
- Bakewell, Dr. R. Hall, on Vaccination and Leprosy, 550.
- Balfour, Rt. Hon. A. J., M.P., 307; Bill of 1898, 328, 657; Medical Opinion, 700.
- Balfour, Gerald, M.P.: "Vaccination Scars," 235.
- Ball, William: Evidence before R.C., 156.
- Ballard, Dr., on Vaccination, 223, 224; Syphilitic Virus, 538.
- Banbury, John: Evidence before R.C., 156.
- Bantock, Dr. G. G., on the Tubercle Bacilli, 677.
- Barfoot, Ald. Wm., J.P.: Evidence before R.C., 156.
- Barlow, Dr., on "Calf Lymph," 593.
- Barons Assemble in Leicester, 38.
- Barran, John (M.P. for Leeds), 86.
- Barry, Dr. F. W.: Vaccinal Death Inquiries, 180, 181; Sheffield Small-Pox Report, 230, 276-289; Omissions from, 278, 285, 286, 296.
- Bartlett, Professor, New York, on Vaccine Disasters, 572.
- Battles of Hastings, 27, 29; Bernard's Heath, Blore Heath, Mortimer's Cross, Northampton, St. Albans, Towton, and Wakefield, 36; Bosworth, 41, 42; Naseby, 50.
- Bayard, Dr. A., Paris, on "Franco-German Army Statistic," 614, 615.
- Bayley, Thomas, M.P.: "Deaths from Glycerinated Calf Lymph," 609.
- B.C. 844-A.D. 52, 17, 18.
- Beaufort, Bishop of Winchester, 39.
- Beaumont, Robert de, Earl of Leicester 30, 31.
- Bedells, Caleb, and Elastic Web Industry, 60.
- Beurle, Ald. W. L., 119, 344, 346.
- Blanchmains, Robert, Earl of Leicester, 30, 31.
- Blennerhassett, R. P. (M.P. for Co. Kerry), 86.
- Biddle, Dr.: "Times" Letter on Leicester, 200.
- Biggs, Ald. J. T., J.P., 91, 92, 107, 108, 118; before R.C., 145, 156, 157, 348.
- Billings, Councillor G. K., 92.
- Birmingham Small-Pox Compared with Leicester, 248, 458.

- Bishop's Palace, The, 22;
 Bishops of Leicester, 22, 23.
 Black, Dr. Campbell, Glasgow,
 on Anti-Toxin, 656.
 Black Death, The, 652.
 Bligdam Hospital, Copen-
 hagen: Diphtheria, 635.
 Bliss, Mr. Lee: Vaccinal
 Deaths at Norwich, 180.
 Böens, Dr. Hubert, Charleroi,
 110, 543.
 Boer War: Inoculations for
 Enteric Fever, 631.
 Bolingbroke, Henry of, Earl of
 Leicester (King Henry IV.),
 33, 34, 36.
 Bombay Legislative Council
 and Vaccination, 553.
 Bond, Dr. F. T., Gloucester,
 76.
 Bonnefin, Dr., on Production
 of Anti-Toxin, 655, 656.
 Bonner, Mr. J. H., Journalist,
 Imprisonment of, 354.
 Boot and Shoe Industry, 61.
 Booth, Councillor Amos, 81,
 118, 337.
 Bosanquet, Dr. W. C., 658,
 666, 667.
 Bossu, Robert, Earl of Lei-
 cester, 31.
 Bouchard, Professor, on Effect
 of Vaccination, 566.
 Bourbons, The, 74.
 Bovo-Vaccine, Dr. Behring's,
 564.
 Bow Bridge and King Richard
 III., 41.
 Boyle, Mr. J. H., M.B., Injury
 from Calf Lymph, 587.
 Bradgate House, Home of Lady
 Jane Grey, 42; Park, 43.
 Braley, Mr. Francis, Chief Sani-
 tary Inspector, 473, 493, 494.
 Bray, Dr.: Vaccination and
 Consumption, 563, 583, 584.
 Breeze, Mr. Louis, 118.
 Bribes for Vaccination, 186.
 Brighthouse Small-Pox Compared
 with Leicester, 248, 458.
 Bright, Jacob (M.P. for Man-
 chester), 87.
 Britain, 17, 19, 21.
 British Army Small-Pox Com-
 pared with Leicester, 290,
 291.
 British Cities, 17,
 British Congress on Tubercu-
 losis, 561.
 British Kings and Queens, 18;
 Empress, 21; Princes, 40.
 British Medical Association at
 Leicester (1905), 710, 711.
 "British Medical Journal,"
 R.C., 139; Small-Pox, 248,
 249; Leprosy, 549; Tubercu-
 losis and Syphilis, 563, 564;
 Humanised Lymph, 583,
 614; Enteric Fever, 631;
 Anti-Toxin, 658; Tubercu-
 lin, 666; Tuberculin Dis-
 pensaries, 676; and Tubercu-
 lin, 678-680; "Anaphylaxis,"
 687, 688, 689.
 British Period—844 B.C.-A.D. 52,
 17.
 British Royal Navy Small-Pox
 Compared with Leicester,
 290, 291.
 Britons, 17.
 Broadhurst, Mr. H., M.P., 344,
 348.
 Bronchitis, 521; Tables 32, 33,
 and 34, 524, 527, 528, 531,
 532; Table 35 and Diagram
 D, 577; and Tables 54, 55,
 and 56, Appendix, 743-748.
 Brouardel, Professor: Deaths
 from Animal Virus, 590.
 Brown, Mr. John (Guardian),
 Mile-End, London, 344, 345.
 Brown, Mr. Joseph, Dewsbury
 (Guardian), 117.
 Bruce, Councillor H. B., J.P.,
 before R.C., 157, 158.
 Brummitt, Mr. H., Lincoln,
 119.
 Brunton, Sir T. Lauder, M.D.:
 Fatal Inoculations for Ty-
 phoid, 632; Tuberculin Dis-
 pensaries, 676.

- Buchan's, Dr., "Domestic Medicine," 362.
- Buchanan, Dr. (afterwards Sir George), 223, 226, 276-289; Omissions, Sheffield Report, 278, 285, 286; 291, 290; on Rugen Disaster, 592.
- Bunyan, John, at Leicester, 51, 55.
- Burgess, Councillor, Norwich, 126.
- Burnaby, Colonel Fred, 68.
- Burnet, Bishop: History of the Reformation, 23; on Parental Authority, 367.
- Burt, Right Hon. Thomas (M.P. for Morpeth), 87.
- Burton, Robert, 68.
- Butcher, Councillor John, 116, 117.
- Byron, Lord, 68.
- Caer-Legria (Leicester), 18, 22.
- Caer-Ierion (Leicester), 17.
- Calf Lymph, 329, 390, 536, 541, 572, 587, 588, 589, 593.
- Calmette, Professor, of Lille, 662, 663, 665.
- Cameron, Dr. Charles, M.P., 136; Vaccinal Syphilis, 541; at Leicester, 710.
- "Cancerous" Matter, 541.
- Caracalla (Roman Emperor), 21.
- Carausis (Roman Emperor), 21.
- Carey, Rev. William, D.D., 64, 65.
- Carpenter, Dr. A., at Leicester, 710.
- Carpenter, Dr. W. B., "Ceara Fable," 613; "Franco-German Statistic," 615-617.
- Carter, Dr. Brudenell, on Vaccino-Syphilis, 540.
- Case in a Nutshell (A. Milnes, M.A.), 514.
- Cases of Small-Pox: In Leicester, 193, 195, 196, 225, 226; at other towns, 228, 230, 234, 248, 458; London, 251.
- Castle, Kirby Muxloe, 36.
- Castle, Leicester, 17, 18, 26, 27, 30, 33, 41.
- Castle "Mount" or "Mound," 18.
- "Castrum," Roman, 17.
- Cathedral at Leicester, 22.
- Cattell, Mr. James, 81.
- Caven, Rev. Robert, Evidence before R.C., 158.
- "Ceara Fable," The, 612-618.
- Cesar, Mr. J. A., 344, 346.
- Ceely, Mr., M.R.C.S., on Animal Vaccination, 586, 587.
- Celtic Caer, or Castle, Leicester, 18.
- Census, Vaccination, at Darlington, 572.
- Century of Vaccination, A (Dr. Scott Tebb), 225, 543.
- Ceowulph (King of Mercia), 22.
- Chamberlain, L. P. (Clerk to Guardians), before R.C., 145, 158.
- Chamber of Commerce, 61.
- Chambers, Ald. H. T., J.P., before the R.C., 158.
- Chambers's Dictionary: Definition of Lymph, 579.
- Chambers, Sir Thomas (M.P. for Marylebone), 87.
- Channing, Mr. F., M.P. (now Lord Channing), 574, 745.
- Chaplin, Rt. Hon. Henry, on Glycerinated Calf Lymph, 307-310, 312, 313, 327, 328, 349, 350, 591, 594, 597.
- Charite Hospital, Berlin, 637.
- Charles I., 43, 49, 50, 51; II., 43, 51.
- Chartist Movement, 62.
- Charnwood Forest, 25.
- Chaumont, Professor du, at Leicester, 709.
- Child, Emily Maud: Death from Vaccino-Syphilis, 544.
- City of Leicester, 17, 18, 20, 21, 23, 24, 29.
- City Walls of Leicester, 24, 26, 30, 51.
- Civil War, 50.

- "Civitas de Ledcestre," 23.
 "Codex Leicestrensis," The, 54.
 Coke, Thomas William, Earl of Leicester, 35.
 Colin, Dr. Leon, on Epidemics, 360, 615, 616, 617.
 Collins, Dr. W. J. (now Sir W. J.): Dissident Report, 300; at Floral Hall, 336, 348; and Dr. Ogle, 525, 526; 537; Tuberculosis and Syphilis, 564; and Mr. Farn, 585; Man versus Microbe, 712-714.
 Commission, Royal, on Vaccination: How they blinked the Facts, 297-301; Final Report, 304, 306.
 Commission, Royal, on Tuberculosis, 562, 681-685.
 Committee, Select, on Vaccination (1871), 85, 136, 702.
 Comparison, Crucial, with Leicester, 290, 291.
 Comparisons, Statistical, with Leicester, 247-294 (see Statistical Comparisons with Leicester).
 Compensation of Contacts, 476, 481, 483, 484.
 Conclusions and Summary, 701-716.
 Conference in Leicester on Local Self-Government, 344-350.
 Congress on Tuberculosis, British, 561; on Hygiene and Demography, 664.
 Connecticut Medical Union: "The Great White Plague," 565.
 Conscience Clause, The Illusory, 320-322.
 Consumption, Causes of, "Keighley Herald," 565.
 Constantine the Great (Roman Emperor), 21.
 Constantinople, 21.
 Constantius (Roman Emperor), 21.
 Contacts: Compensation of, 476, 481, 483, 484; Vaccination of, 481, 486.
 Continental Small-Pox, 261-263.
 Continental Evidence against Anti-Toxin, 635-637.
 Cook, Thomas, Excursionist, 60.
 Cooper, Thomas, Chartist, 62.
 Copeman, Dr. Monckton, 235, 594, 595; G. C. "Lymph," 598-602; Corpse Small-Pox "Lymph," 607, 608.
 Cobbett, William: Papers, 57.
 Cordelia (British Queen), 18.
 Corfield, Professor, at Leicester, 710.
 Coritani, The, 18.
 Christianity, Establishment of, at Constantinople, 21.
 Clifton, Ald. George, J.P., and Mrs., Mayor and Mayoress of Leicester, 344.
 Clodius Albinus (Roman Emperor), 21.
 Corpse Lymph, 606-610.
 "Corpus Vilis," 699.
 Cort, Mr. R., Guardian, 337.
 Cory, Dr. Robert, 547, 600, 602.
 Cost of Glasgow Small-Pox Epidemic, 273, 274, 492.
 Cost of Guardians' Fight with Local Government Board, 342.
 Cost of "Leicester Method," 477-486.
 Cost of Leicester Small-Pox Epidemic, 492.
 Cost of London Small-Pox Epidemic, 264, 265, 492.
 Cost of "Quarantine," 478-486.
 Cost of Sheffield Small-Pox Epidemic, 287-289, 492.
 Cost of Vaccination, 480, 485, 490, 491.
 Costs and Fines in Leicester, 101-103, 351-355.
 County Borough of Leicester, 17.
 Coupland, Dr., at Dewsbury, the "Marks Theory," 231.
 Cowen, Arthur (M.P. for Southwark), 87.
 Cowen, Joseph (M.P. for Newcastle-on-Tyne), 87.

- "Cowhay" or South Fields, 30.
 Cowpox, Deaths from, Table 2, pp. 184, 185.
 Craig, Wm. Y. (M.P. for North Staffs.), 87.
 Cragoe, Mr. Thomas, 119, 122, 123.
 Crane, Dr. J. W., M.O.H. for Leicester (1867-79), 380-388.
 Creighton, Dr. Charles, 102, 132, 282, 283, 536, 545, 547, 548, 625, 626.
 Crick, Mr. Thomas, and Boot and Shoe Industry, 61.
 Crida, first Saxon King of Mercia, 22.
 Crimean War, 55; and Miss Florence Nightingale, 628, 629.
 Criticisms of the "Leicester Method," 711.
 Cromwell, Oliver, at Leicester, 43, 50, 51.
 Crookshank, Professor, E. M., 545; "Lymph," 585; 619, 625.
 Crouchback, Edmund, Earl of Leicester and Lancaster, 34.
 Curthose, Robert (Duke of Normandy), 29.

 "Daily News," Letter to, on Demonstration, 107, 108; Franco-German Statistic, 613-618.
 "Daily Post," Leicester, 337, 338.
 "Daily Telegraph," 694, 695.
 Damien, Father, the Leper Martyr, 552.
 Dane Hills Fair, 25.
 Danes in Leicester, 23, 24, 25, 26.
 Daniellson, Dr., of Norway, on Leprosy, 556, 557.
 Danish Period (780-920), 24, 25; Confederacy, 24; Five Boroughs, 24, 25; Kings, 40.
 Darke, Mr. E. T., Patentee of "Glycerinated Calf Lymph," 308.
 Darkness to Light, From, 79-84.
 Darling, Mr. Justice, and Leicester Guardians, 335.
 Darlington Vaccination Census, 572.
 Davey, Mr. Henry, and Shoe-Last Industry, 61.
 Deaths from Glycerinated Calf Lymph, 573, 592, 608, 609.
 Death-Rates, General, Compared with Leicester, 292-294.
 Deaths from Vaccination Officially Certified, 179-186; Derby, 180, 181; Leicester, 181; Misterton, 179; Norwich, 180; Registrar-General, 183-186; Other Sources, 539, 541, 543, 544, 571, 572, 573, 590, 592, 608, 609.
 Demonstration, The Great, at Leicester, 107-130; Meetings in Market Place, 116-119; Meeting in Temperance Hall, 119-123; Procession, 111-116; Conference of Delegates, 123-126.
 Derby, Vaccinal Death at: Official Inquiry, 180.
 Dermatologists, Leading, on Leprosy, 550, 551.
 Dewsbury, Small-Pox at: Dr. Coupland's Figures, 231.
 Diagnosis, Errors of, 198-202.
 Diagrams—A, 177; B, 246; C, 291; D, 577; E, 639; F, 647; G, 720; H, 723; J, 734.
 Diarrhœa, Principally Infantile, Death Incidence, Tables 8, 9, and 10, 212, 213; Tables 13 and 14, 236-238, 521-523; and Dysentery, 524, 528, 531, 532, Table 32, 524; Table 33, 527; Table 34, 528; Table 35 and Diagram D, 577; and Tables 41, 42, 43, 44, and Diagrams G and H, 718-725;

- Table 52, 739-741; Tables 54, 55, 56, Appendix, 743-748; and Sea Water, 697-700.
- Dictionary of Medicine, 586.
- Different Kinds of Tuberculin, 661, 665, 666.
- Dilke, Sir Charles, M.P., 92.
- Dimsdale, Dr., and Small-Pox in Russia, 363.
- Dingle, Dr., M.O.H., Middlesbrough: Small-Pox Marks Theory, 227, 228, 453.
- Diphtheria, Death Incidence, Tables 8, 9, and 10, 212, 213, 630-654; Tables 36, 37, 38, 39, 40, and Diagrams E and F, 639-651; and Tables 41, 42, 43, 44, Appendix, 718-725; and Table 52, Appendix, 739-741.
- Diphtheria, Anti-Toxin and, 630-654; High Fatality of Treated Cases, 639, 640; Low Fatality of Non-Treated Cases, 639, 640; in Foreign Countries, 635-637; in America, 635-637; London, 638-642, 644; in England and Wales, 643-645; Leicester, 646-654; Japan, 652; Case Fatality, Tables 36, 639, 39, 649, 40, 651; Moribund Cases, 640; Sequelæ of Anti-Toxin, 657, 658.
- Diseases Injected, Increased, or Intensified by Vaccination, Zymotic, 208-210, 570-578; Tables 41, 42, 43, and Diagram H, Appendix.
- Dissentient Commissioners' Report, 300, 301, 525, 526; Lymph, 534-536, 588, 589.
- Distinguished Syphilographers, 537.
- Distress Warrants at Leicester, 101, 103, 353.
- Distribution of Disease, Universal, 583, 590.
- Dixon, Dr., on Vaccination Marks, 228.
- Doomsday Book, 23.
- Doubtful Vaccination, 223.
- Drinkwater, Mr. S., 81.
- Dudgeon, Mr. H. D., 84; on Sanitation, 357-367; on Franco-German Statistic, 615, 616.
- Dudgeon, Miss Louisa, 359.
- Dudley, Robert, Earl of Leicester, 35.
- Dudley, Lord Guildford (Husband of Lady Jane Grey), 43.
- Dukes of Lancaster, 32, 33, 34; of Gloucester, 39.
- Duns, Mr. James (Chief Constable of Leicester), before R.C., 158, 159.
- Dysart, Earl of, 48.
- Dysentery, Enteric Fever and, in South African Army, 631.
- Eagle, Mr. Charles, 81; before R.C., 159.
- Earle, General J. M., 116, 119.
- Earls of Leicester: Saxon, 26-28; Norman, 30, 31, 33; Plantagenet or Lancastrian, 34, 35.
- Economy of "Leicester Method," 490, 492, 477-494, 498.
- Edith "The Fair," 27.
- Edmund Ironsides (Saxon King), 26.
- Edmund, King of Mercia, 24; and of all England, 25.
- Education Act, 67.
- Edward, King, I, 40; II., 40; III., 38, 40, 41; IV., 36, 37, 41, 54; VI., 42; VII., 43, 44.
- Edward the Confessor, King, 27.
- Edwards, Councillor E., 336.
- Edwin, Earl of Leicester and Duke of Mercia, 28.
- Efficiency of the "Leicester Method, 477-494, 498.
- Eighteenth Century Small-Pox, Table 20, pp. 262, 263.
- Elastic Web Industry Started at Leicester, 60.
- Elidure (British King), 18.

- Elizabeth, Queen, 35, 43, 46, 47, 55.
- Ellis, Miss (Guardian), at High Courts of Justice, 335.
- Ellis, James, M.P. (Chairman of School Board): Evidence before R.C., 159.
- Ellmore, Mr. W. P. (Guardian), 81; Evidence before R.C., 159.
- Ellingworth, Mr. G. H., 118.
- Eminent Opinions on Vaccination, 622-629.
- Emms, Dr. A. W., J.P., before the R.C., 159.
- England and Wales: Death-Rate Compared with Leicester, 292-294.
- England, Scotland, and Ireland: Small-Pox Fatality, 261.
- Engles (Saxon English), 22; Middle, 22, 23.
- Enteric Fever in Boer War, Fatal Inoculations for, 631; in Japanese Army, 631.
- Epidemics of Small-Pox--Leicester, Table 3, 190, 191, Table 4, 193, 194, 411, 460, 492; Glasgow, 248, 266-275, 458, 492; Fatalities Compared, Table 16, 248, Table 17, 260; London, 250-260, 492; Pre and Post Jennerian, Tables 18 and 19, 261; Eighteenth, Nineteenth, and Twentieth Centuries, Table 20, 262, 263; Sheffield, 276-289, 492; Japan, British Army and Navy, and Leicester, Table 21, 291; London, Glasgow, Sheffield, and Leicester, Table 29, 492.
- Epidemiological Society, Transactions of: Rugen Disaster, 592.
- Epps, Dr., on Pock-Marked Faces, 216, 218.
- Errors of Diagnosis--Small-Pox: London, 198; Leicester, 198-202.
- Erysipelas: and Vaccination, Table 1, 176-182; and Syphilis, 516, 521-524, 527, 528, 531-533; Table 30, 516; Tables 32, 33, 34, and 35, and Diagram D, 524-533; Table 52, 739-741; and Tables 54, 55, and 56, Appendix, 743-748.
- Eternal City, The, Rome, 17.
- Ethelflæda, Queen (Daughter of King Alfred), 24, 26.
- Ethelred, Duke of Mercia, 24.
- European Armies, Vaccination and Tuberculosis in, 568.
- Evesham Letter, 327.
- Evidence, Statistical, 171-246; Comparisons, 247-294.
- Ewing, Mr. J., 117.
- Examination, A Lengthy, 171, 172.
- Exemptions at Leicester, 322, Table 24; Clause, 329.
- Exeter, Royal Institute of Public Health at, 499.
- Expenditure at Leicester Hospitals, "Leicester Method," 481, 487-494.
- Eyre, Dr. J. W. H.: Serums, etc., 658.
- Fair Field for "Leicester Method," A, 495-498.
- "Fallacies and Failures of Serum Therapy," 658.
- Famous Mandamus, The, 339, 340.
- Farn, Mr., Local Government Board Examiner of "Lymph," 584, 585.
- Farquharson, Dr., M.P., 133, 296.
- Farr, Dr. William: London Vital Statistics, 634.
- Fatal Injections of Serum, 658, 659.
- Fatal Inoculations for Enteric Fever in Boer War, 631.
- Fatality Rates of Unvaccinated, 264, 442, 452, 454, 706.
- Fateful Vote, A, 90.

- Fergusson, Robert (M.P. for Carlisle), 87.
- Ferrari, Dr. P., on Koch's Tuberculin in Leprosy, 556, 557.
- Fevers, Group of Simple, Tables 6, 7, 8, 9, and 10, 204-213; Tables 41, 42, 43, and 44, and Diagrams G and H, Appendix, 718-725; and Table 52, Appendix, 739-741.
- Fevers, Small-Pox and, Leicester, Tables 6 and 7, 203-207.
- Final Report, Royal Commission on Vaccination, 304-306.
- Fines and Costs Imposed on Leicester Anti-Vaccinators, 101-103, 351-355.
- Finlay, Sir R. B., M.P., Solicitor-General, 335.
- Fitz Parnel, Robert, Earl of Leicester, 31.
- Fitz Roger, Peter, first called Mayor of Leicester, 53.
- "Fleeting Protection" of Vaccination: Dr. Gayton, 227.
- Flint, Councillor S., at Floral Hall, 336.
- Floral Hall Mass Meeting, 335.
- Forbes, Sir John, M.D., Physician to late Queen, 689.
- Foreign Evidence against Anti-Toxin, 635-637.
- Fosse Way, The (or Via Fossata), 20, 21.
- Fox, Mr. George, 68.
- "Franco-German" Army Statistic, The, 613-618.
- "Frankfurter Zeitung," The, 363.
- Freakes (Ground Small-Pox Hospital, Leicester, 387.
- French and German Armies, Vaccination in, 613-618.
- Friars Road Small-Pox Hospital, Leicester, 386.
- Frith, Mr. George, 81; Evidence before R.C., 160.
- Fry, Rev. William (Canon), 66-68.
- Fulham Hospital, Small-Pox at, 233.
- Gadsby, Mr. John, Traveller, on Medical Treatment, 627, 628.
- Garner, Mr. John, and Mr. George Saddington: First Vaccination Prosecutions in Leicester, 149.
- Gaunt, John of, Earl of Leicester, 32, 33, 40, 42.
- Gayton, Dr.: "Fleeting Protection" of Vaccination, 227; Fulham Hospital, 233.
- "Gazette Hebdomadaire des Sciences Medicales," 566.
- General Death-Rate at Leicester, Table 15, Diagram B, 245, 246.
- General Death-Rates Compared with Leicester, 292-294, 446.
- Geoffrey of Monmouth, 17.
- George, King, III., 57; V., 33.
- German Commissioners on Rugen Disaster, 592.
- German Vaccination and Small-Pox Statistics, 618-620.
- German Minister of War and the "Franco-German" Army Statistic, 617.
- Gibbs, Mr. G. S. (Mrs., 116), 119, 123; Injuries and Deaths from Vaccination at Darlington, 572; "Franco-German" Statistic, 617.
- Gilders, Mr., at Leicester, 346.
- Gillette, Dr., on "Serum" Sickness, 690.
- Glasgow, Small-Pox, and Leicester, 248, 266-275, 458; Vaccinal Condition of, 275; Exhibition, 273; Cost of Vaccination and Revaccination, 274; Cost of Special Precautions, 274.
- Gloucester, Duke of, at Leicester, 39.
- "Glycerinated Calf Lymph": "Patented," 308; 308-310,

- 591-597; How Manufactured, 598-602; Conclusions Offered to Mr. Chaplin, 597; Report to L.G.B. on Preparation and Storage, 594; Samples from the Continent, 600-602; Paris, 598-600; Brussels, 600; Berlin, 600, 601; Dresden, 601; Cologne, 602; Geneva, 602; Constituents of, 601, 602, 704; Deaths from, 573, 592, 608, 609.
- Goddard, Mr. J. Wallis, Chairman, Leicester Guardians, 81.
- Godiva, Lady, Countess of Leicester and Coventry, Duchess of Mercia, 26.
- Godwin, Earl of Wessex, 27.
- Golding, Mr., Leytonstone, at Leicester Demonstration, 110.
- Goldschmidt, Dr. Julius: Tuberculin and Leprosy, 557.
- Goodall, Dr. E. W., M.D., on Serum Treatment, 689.
- Gorbonium (British King), 18.
- Gore Farm Lower Hospital and Vaccination, 186, 187.
- Government Lymph, 584, 585.
- Granville, Earl, Foreign Secretary, and the "Franco-German" Statistic, 616, 617.
- Gratuities to Sanitary Staff at Leicester, 481, 483.
- Great Demonstration at Leicester, The, 107-130.
- Great Siege of Leicester, The, 30.
- Great Towns, Death-Rate of, Compared with Leicester, 292-294.
- Great White Plague, The, 565; Annual Deaths from, 660; 663, 664.
- Grentemaisnil, Hugo de, first Norman Ruler of Leicester, 29, 30.
- Grey, Lady Elizabeth (Queen of England), 36.
- Grey, Lady Jane (Queen of England), 41, 42.
- Grey, Lord Henry, 43.
- Grey, Sir John, 41.
- Griffith (Welsh King), 27.
- Groby Castle, 30.
- Grotesque Superstition, A, 102, 625.
- Guardians, The Leicester: Memorials to L.G.B., 95-100, 324-333; to R.C., 145-154; A "Quantite Negligible," 154; Special Clause to Retain Power of Control, 312, 315; Refuse to Appoint V.O., 323, 324; Attend at the High Courts of Justice, 334-338; Served with Mandamus, 334, 339, 340; Writ of Attachment, 341, 342; Deprived of Control of V.O., 703.
- Gunn, Professor R. A., of New York, on the Evils of Vaccination, 540.
- Hackett, Mr. Harry, Journalist, before R.C., 160.
- Hadrian (Roman Emperor), 20, 21.
- Hadwen, Dr. W. R., J.P., Gloucester, 346, 347, 349,; on Diphtheria, 636.
- Häen, Dr. A. de, on Pre-Vaccination Small-Pox Fatality, 262.
- Haffkin's Sera, 631.
- Halifax Small-Pox Compared with Leicester, 248, 458.
- Hall, Rev. Robert, Famous Orator and Preacher, 65.
- Hall, Dr. Spencer T., 119, 125.
- Halse, Mr. H. B., 81.
- Hamernik, Professor Josef, M.D., on Vaccinal Syphilis, 539.
- Handbook of Vaccination: Dr. Seaton, 586.
- Handley, Mrs., on Risks of Tainted "Lymph," 554, 555.
- Hanoverian Period (1713-1837), 55-58.

- Harold, King, of England, 27.
Hart, Ald. Sir Israel, J.P.,
118; before R.C., 160, 335-
337.
Hart, Mr. Ernest, M.R.C.S.,
on Humanised "Lymph,"
583; on "Ceara Fable," 612.
Hart, Mrs. Kate, before R.C.,
161.
Harvey Lane Chapel, 65.
Hastings, Battle of, 27, 29.
Hastings, Sir William, 36.
Hat and Cap Industry in Lei-
cester, 61.
Haughton, Dr. E., at Leicester,
346.
Hazel, Mr. Walter (M.P. for
Leicester), 314, 348, 349.
Health of Towns Commission
(1842), 365.
Heberden, Dr., on Small-Pox
Fatality, 262.
Helena (Roman Empress of
British birth, Mother of
Constantine), 21.
Henley, Mr. J. J.: Vaccinal
Death Inquiry, 180.
Henrietta Maria, Queen of
England, 50.
Henry of Bolingbroke, 33, 34,
36.
Henry, King, II., 40; III., 38,
40; IV., 36, 40; V., 38, 41;
VI., 36, 38, 41; VII., 42,
45; VIII., 23, 42, 48.
Henry, Earl of Leicester and
Lancaster, First Duke of
Lancaster, 34.
Henry, Earl of Richmond
(afterwards King Henry
VII.), 41, 42.
Hereward the Wake, 26.
Herrick, Robert, 68.
Herschell, Lord, Chairman,
R.C., 145, 152; on Rugen
Disaster, 592.
High Bailiff of Leicester, An-
cient Office of, 53.
High Courts of Justice, The
Guardians at, 334-338.
"History and Pathology of
Vaccination": Crookshank,
625.
Hodgson, Mr. Robert, before
R.C., 161.
Holland, John R. (M.P. for
Brighton), 87.
Homerton Hospital, 233.
Hope, Dr. (M.O.H., Liverpool),
at Exeter Royal Institute of
Public Health Congress, 503.
Hopkirk, Mr. Arthur, M.D.,
and the "Franco-German"
Statistic, 617.
Hopps, Rev. J. Page, 119;
before R.C., 161.
Hopwood, C. H., Q.C. Recorder
of Liverpool (M.P. for Stock-
port), 87, 349, 574, 743.
Hospital Expenditure, "Lei-
cester Method," 481, 485-
494.
Hospital Ships, London, 254.
Hospital Stidende, The: Tuber-
culin, 679.
House of Commons, 77, 85, 86,
110, 513-575.
House of Lords, 77, 78.
Howard, Mr. James (M.P. for
Bedfordshire), 87.
Howard, Mr. John (Philanthro-
pist), at Leicester, 56.
How "Glycerinated Calf
Lymph" is Manufactured,
598-602; Paris, 598-600;
Brussels, 600; Berlin, 600,
601; Dresden, 601; Cologne,
602; Geneva, 602.
How Leicester Deals with
Small-Pox, 461-465.
Humanised "Lymph," 582-586.
Hume, Mr. Hope, at Leices'er,
117.
Hunns, Mr. Jabez, Journalist,
119.
Hunter, Dr. John, on Animal
Vaccination, 622.
Husband, Dr., on Blood Cells
in "Lymph," 536, 588.
Hutchinson, Mr. Jonathan, on
Vaccinal Syphilis, 540, 544-
547.

- Ill Effects of Serum Administra-
 tion, 687.
 Illusory Conscience Clause,
 The, 320, 322.
 "Immunity in Infectious
 Disease," by Prof. Metchni-
 koff, 607, 668, 693, 694, 695.
 Impartial Inquiry Wanted,
 701-704.
 Imperial Vaccination League,
 The, 75, 76.
 Importations of Small-Pox in
 Leicester, 195-197, Table 5.
 Imprisonments in Leicester:
 List of Persons, 101, 103-105,
 354.
 Incidence of Zymotic Diseases
 in Leicester, Tables 8, 9, 10,
 211-214.
 "Individualist," The: Mr.
 J. H. Levy on the Tubercu-
 losis Commission, 681-685.
 Infantile Diarrhoea, 236, 237.
 Infected Lymph, Risks of, 554,
 555.
 "Inflammable Material" at
 Leicester, 199, 395.
 Injuries and Deaths from Vac-
 cination, 173-175, 179-187,
 570-573.
 Inoculable Diseases: England
 and Wales Death-Rates per
 million, 574, 578.
 Inoculable Diseases, List of,
 570-573; E. and W., Table
 35 and Diagram D, 574-578.
 Inoculated Calves and Jew-
 ish Rabbis, 601.
 Inoculation in 1770, Curious
 Advertisement of, 408, 409.
 Inoculation Experiments for
 Leprosy, 556-560.
 Inoculation Mania, The, 630-
 700.
 "Insurance Spectator," The, on
 Inoculation Fatalities in Boer
 War, 631.
 Inquiry, A One-Sided, 302, 303.
 Institute of Public Health at
 Exeter, 499.
 International Congress of Hy-
 giene (1891), 594.
 International Congress of Hy-
 giene and Demography at
 Madrid, 664.
 International Congress on Tu-
 berculosis at Washington
 (1908), 663.
 Invaccination of Syphilis, 537-
 548.
 Invincible Armada, The, 47.
 Irons, Mr. E. H., before R.C.,
 161.
 Isolation and Quarantine in
 Leicester, 466-476; Cost of,
 477-486.
 Isolation and Small-Pox Hos-
 pital Expenditure, 487-494.
 Italian Small-Pox Statistics,
 620, 621.
 James I., 43, 49; II., 43, 52.
 Japan, Concurrent Increase
 of Vaccination and Tubercu-
 losis, 569; Diphtheria, 652.
 Japan, Small-Pox in, Com-
 pared with Leicester, Table
 21, 290, 291.
 Jarrom, Mr. Anthony, before
 R.C., 161.
 Jenner, Dr. Edward, 57, 74, 75,
 218, 225, 365, 580, 630, 712.
 Jenner Society, The, 76.
 Jennings, Councillor Elijah,
 81.
 Jesty, Benjamin, 73, 74, 630.
 Jewish Rabbis and Inoculated
 Calves, 601.
 John of Gaunt, Earl of Lei-
 ceaster and Duke of Lan-
 caster, 32, 33, 34, 40, 42.
 John, King, of England, 38,
 40, 54.
 Johnson, Dr., Author, 68, 77;
 on Credulity, 217.
 Johnson, William, First Anti-
 Vaccinator Imprisoned, 103,
 105.
 Johnston, Dr. William, M.D.,
 M.O.H. for Leicester (1879-
 1885), 388; started the "Lei-

- chester Method" of Isolation and Quarantine, 461-476.
- Jones, Col. A. S., Letter to "Times" on "Bovine Tuberculosis," 669.
- Jones, Dr. J. A., on Enteric Fever in Japanese Army, 631.
- "Journal d'Hygiene" on Syphilisation of Soldiers in Algeria, 542.
- Judges Censured by James I., 49, 50.
- Julian the Apostate (Roman Emperor), 21.
- Julius Agricola (Roman General), 19.
- Justices, Wages Paid to, 45.
- Kaer-leir (Leicester), 18.
- Keeling, P.S. William, before R.C., 162.
- "Keighley Herald," The, on Causes of Consumption, 565.
- Kemp, Mr. F. W., 81, 337.
- Kempson, Ald. Wm., J.P., before R.C., 162.
- Kennulph, King of Mercia, 22.
- King Edward VII. and Tuberculosis, 561.
- King George V., 33.
- Kings and Queens, British, 18.
- King's College, Professor Crookshank at, 545, 585, 619, 625.
- King's "Writ" does not run in Leicester, 354.
- "Kill" or "Cure" Principle, The, 657.
- Kirby Muxloe Castle, 35.
- Kitchener, Lord, 68.
- Klein, Dr.: Microbic Experiments on "Glycerinated Calf Lymph," 603-605; "Micro-Organisms and Disease," 676, 677, 694.
- Knaggs, Dr. H. V., on the Tubercle Bacillus, 677.
- Koch, Professor: Tuberculin, 556, 551, 562, 563, 660, 661, 662, 665, 666, 668, 671, 672, 679.
- Kussmaul, Professor, on Vaccination in Germany, 363.
- Labouchere, Henry (M.P. for Northampton), 87.
- Lady Godiva, Countess of Leicester and Coventry, Duchess of Mercia, 26, 27.
- Lakin, Mr. William, 81.
- Lancastrian and Yorkist Period (1399-1485), 36, 31.
- "Lancet," The, 93; Appointment of R.C., 137-139; Fate of Leicester, 201, 202; Pock-Marked Faces, 216; Leprosy, 549, 554, 557, 558, 587, 625, 661, 668, 714.
- Lane, Mr., F.R.C.S.: Lectures on Syphilis, 541, 542.
- Langerhaus, Dr., Berlin: Son Killed by Anti-Toxin, 637.
- Lankester, Dr. Henry: Evidence before R.C., 162, 163.
- "La Peste" in France, 359.
- Latham, Dr. Arthur, on Tuberculin Dispensaries, 676.
- Latimer, Hugh, Bishop and Martyr, 46; and Burying-Places, 366.
- Lawrie, Dr. William Forbes, on Vaccino-Syphilis, 541.
- Lawson, Sir Wilfred (M.P. for Carlisle), 87.
- Lazaretto Hospital, Madeira, 557.
- Lear (British King), 17, 18, 40.
- Leavesley, Councillor James, Chairman Leicester Board of Guardians, 81; before R.C., 163.
- Leeson, Councillor Joseph, Chairman Leicester Board of Guardians, 81, 145, 163.
- Legorencis Civitas (City of Leicester), 23.
- Leicester: Past and Present, 17-70; Abbey, 48; "Advertiser," 59; Ancient Charters, 53, 54; Anti-Toxin, Evi-

dence against, Tables 38, 39, 40, 646-654; Anti-Vaccination League, 79, 80; Anti-Vaccination "Mecca," 200, 497; Barons Assemble at, 38; British Period, 17, 18; Small-Pox Compared with British Army, Table 21, 290, 291; British Medical Association at (1905), 710, 711; Castle, 18, 26, 27, 30, 32, 33; Caer-Lerion, 17, 18; Caer-Legria, 18; Capital of Mercia, 22; City of, 17, 18, 20, 21, 24, 29; "Civitas de Ledcestre," 23; Compared with Other Towns, Table 16, 247, 248, 262, 263, 291-293, 458; County Borough, A, 17; "Chronicle," 59; Corporation Act (1879) Special Clauses, 464; Cost of "Leicester Method," 477-494; Coroner, Appointment of, 54; "Daily Mail," 60; "Daily Mercury," 60, 92, 93; "Daily Post," 59, 60, 96, 94, 127, 337; Danish Period (780-920), 24, 25; Diarrhoeal Death-Rate, 236-240; Diphtheria Deaths (1838-1910), Table 38, 647; Diphtheria Fatality before and after Anti-Toxin, Tables 39, 40, 649-651; Exemptions, Table 24, 322; Evidence Reviewed, 705-708; Evidence: Its Teachings, 709-716; and England and Wales Death-Rates Compared, Tables 22 and 23, 292-294; Fines and Costs Imposed on Anti-Vaccinators, 101-103, 351, 355; Forest, 25; Guardians and R.C., 144, 145-154; Guardians' Memorials to L.G.B., 95-100, 323-333; and Glasgow Small-Pox Compared, 248, 266-275, 458; Great Charter Surrendered, 52; and Great Towns and 136 Smaller

Towns, Death-Rates Compared, Tables 22 and 23, 292-294; Growth of, 68; Hanoverian Period (1714-1837), 55-58; "Herald" 57; High Bailiff, Appointment of, 53; Hospital Expenditure, 481, 487-494; Importations of Small-Pox, 195-197; Incorporation in 1588, 47, 55; Infantile Death-Rate, Tables 13 and 14, 236-240; and Japan Small-Pox Compared, Table 21, 290, 291; Kaer-leir, 18; Lancastrian and Yorkist Period (1399-1485), 36, 37; and London, Table 17, 250-260; Tables 22 and 23, 292-294; Magistrates, First Appointment of, 54; Martyrs under Vaccination Act, 101-106; "Marks" Theory, 225-235.

Leicester Medical Officers of Health and Vaccination (1846-1910), 372-388; before the Introduction of the "Leicester Method": Doctors Barclay and Buck (1846-53), 372; Dr. Moore (1853-67), 375; Dr. Crane (1867-79), 380; Dr. Johnston, who introduced the "Leicester Method" (1879-1885), after the Introduction of the "Leicester Method," 389-409; Dr. Tomkins (1885-92), 389; Dr. Priestley (1892-95), 397; Dr. Monk (1895-1900), 398; Dr. Millard (1901-10), 400 (still M.O.H., 1912), 411-419; 435-447; 461-476.

Leicester "Midland Free Press," 59.

"Leicester Method" of Dealing with Small-Pox, 72, 190, 195, 196, 197, 240, 294; Advantages of, 461-514; Summarised, 472, 475, 476; *Modus Operandi* of, 475, 476; Quarantines, 477-486; Cost

- of (Table 25), 477-486; Saving by, 490, 491; Economy of (Table 29), 490-492; Efficiency of, 492; "At Work," and Fair Field for, 495-498; Ald. Thomas Windley, J.P., on, 499-504; Dr. C. K. Millard on, 505-514; Forty Years' Experience of, 705-707; Criticisms of, 711; Evidence: Its Teachings, 709-716.
- Leicester: Navigation Act, 58; Norman Period (1068-1265), 29-31; Parliaments held at, 38, 39; Plantagenet Period (1265-1399), 32-35; Products and Manufactures, 58, 61; Quarantine for Small-Pox, Cost of, 477-486; Recorder, Appointment of, 54; and the Registrar-General's Letters, 529, 530; Roman Period (52-488), 19-21; and Royal Commission on Vaccination, 143, 144; Witnesses, 155-170; and Royal Navy Small-Pox Compared (Table 21), 290, 291; Royal Visits to, 40-44; Sanitary Institute at, 709, 710; Savings Bank Established, 58; Saxon Period (550-780), 22, 23—Restored (920-1068), 26-28; See of, 22; Sieges of, 24, 26, 29, 30 (The Great), 50; and Sheffield Small-Pox Compared, 276-289; Small-Pox Compared with Other Towns, 248, 458; Small-Pox Epidemics Compared (Tables 3 and 4), 188-194; Small-Pox Epidemic (1892-94), 411-419; Lessons of, 420-434; Small-Pox Compared with Aston Manor, 248, 458; Small-Pox Epidemic (1902-04), 435-447; and Small-Pox (1902-04), 448-460; Small-Pox Fatalities, 706; Small-Pox and Fevers (Tables 6 and 7), 203-207;
- Stuart and Commonwealth Period (1603-1714), 49-52; and Swannington Railway, 58; School Board Resolution and R.C., 144; Town Council and R.C., 143; Tudor Period (1485-1603), 45-47; Vaccinal Death at: Official Inquiry, 181; Vaccinal Injuries and Deaths, 173-175, 181; Victorian Period (1837-1912), 59-70; Vital Statistics (1911), 754; Yorkist, Lancastrian and, Period (1399-1485), 36, 37.
- Leicester's Awakening, 71, 72; Effort for the Abolition of Penalties, 312-319; Traducers Unmasked, Tables 32, 33, and 34, 520-533; Unvaccinated Case Fatality Rates, 264, 442, 443, 452-454, 706.
- Legre-Ceastre (Leicester), 18, 23.
- Leir, River, 17.
- Leire, Village of, 18.
- Leloir, on Leprosy, 551, 552.
- Lengthy Examination, A, 171, 172.
- Lennard, Ald. S., J.P., 344.
- Leofric, Earl of Leicester and Coventry, Duke of Mercia, 26, 27.
- "Le Progres Medical" on Dangers of Animal Virus, 589, 590.
- Leprosy: Recrudescence of, 549-555; Investigation Committee, 552-555; "Journal," 557; and Tuberculin, 556-560.
- Leprosy, Leading Dermatologists on, 550, 551; and Vaccination—America, Sandwich Islands, West Indies, Russia, Norway, Egypt, India, Cape Colony, Madeira, 553-559; Summary of Conclusions, by Mr. Tebb, 558-560.
- Lessons of the Small-Pox Epidemic at Leicester (1892-94), 420-434.

- Lester, Mr. Edwin (Guardian), 81.
- Lettsom, Dr., and Cow-Pox, 363, 364.
- Leverson, Dr. M. R. (New York), **34652**.
- Levy, Mr. J. H. (Author), on Tuberculosis Commission, 682.
- Liberty, A Noble Protest for, 366, 367.
- Lichfield, See of, and Leicester, 22.
- Lind-af-Hageby, Miss, on Serum Therapy, 658.
- List of Imprisonments in Leicester, 101, 103-105, 354.
- List of Inoculable Diseases, 571.
- List of Tuberculins, 665, 666.
- Literary and Philosophical Society, 56, 57.
- Littlejohn, Sir Henry, at Exeter Congress, 675.
- Liverpool Small-Pox Compared with Leicester, 248, 458.
- Loat, Miss L., on German Vaccine, 607.
- Local Government Board: and Leicester Guardians, 91-95; Guardians' Memorials to, 95-100, 324-333; Standard of Vaccination, 195; 343, 351, 355; Letter on Rugen Disaster, 592.
- Local Self-Government, Conference on, 344.
- Löffler Bacillus, 633, 657.
- Logan, Mr. J. W., M.P., 314.
- Lollards, The, 32, 38.
- London, 17; Small-Pox Compared with Leicester, 250-260; Table 17, 453; General Death-Rate Compared with Leicester, Tables 22 and 23, 292-294.
- London Evidence against Anti-Toxin, Table 36, Diagram E, 638-642.
- London Pathological Society, Transactions of (Anti-Toxin), 655.
- London Society for the Abolition of Compulsory Vaccination, 108, 571.
- Lucius (Roman Gladiator), 19.
- Luddites Executed at Leicester, 58.
- Lunn, Mr. Charles, before R.C., 164.
- Lymph, 579-590; and Vaccination, 579-621; List and Varieties of, 580-582; Dr. Blaxall on, 582; Humanised, 582-586; Animal, 586-590; Glycerinated Calf, 591-597; Definition of, in Chambers's Dictionary, 579; in Standard Twentieth Century Dictionary, 579; L.G.B. Establishment, 596; How Manufactured, 598-602; Constituent Elements of, 601, 602; Small-Pox Virus Vaccine, 606-610. "Lynn Advertiser," The, 544.
- M'Arthur, Alexander (M.P. for Leicester), 118, 258.
- Macaulay of Rothley, Lord, on Small-Pox, 62-64.
- MacCombie, Dr. (Brook Hospital, M.A.B.), on Anti-Toxin and Diphtheria, 641, 642.
- Macdonald, J. Ramsay (M.P. for Leicester), 575, 576, 746.
- Madras "Times," The, on Leprosy, 554.
- Magistrates First Appointed in Leicester, 54.
- Magna Charta, Granted by King John, 38.
- Magnus, Dr. Hugo, on "Superstition in Medicine," 659.
- Makuna's, Dr., Vaccination Inquiry, 544, 570.
- "Man Versus the Microbe, The," Sir William Collins on, 712.
- Manchester, Dean of, at Sanitary Congress, 712.

- Manchester Small-Pox Compared with Leicester, 248, 458.
 Mandamus, Leicester Guardians served with, 339, 341.
 "Man's Inhumanity to Man," 560.
 Mansfield, Mr. Herbert. Clerk to Guardians, 331, 333.
 Manufactured Lymph, 598-602.
 Market-Place, Meeting in the Leicester, 116.
 Marks Theory, Protection by, 225-229.
 Marks Theory, The, 230-235.
 Marson, Mr., 225, 233.
 Martin, Mr. W. T., of Lewes, 119.
 Martyrs to the Vaccination Acts, Leicester, 101-106.
 Maskell, Mr. W. H., Leicester Vaccination Officer, before Royal Commission, 164, 319, 339.
 Massacre of the Innocents, 239.
 Mass Meeting at Floral Hall, 335.
 Mary I., Queen of England, 43, 46.
 Mary II., Queen of England, 63, 64.
 Mary, Queen of Scots, at Leicester, 43.
 Matts, Mr. Henry, 81, 103, 105; before R.C., 164.
 Maurans, Dr. De. Diphtheria Fatality in Paris, 637.
 Measles: Incidence Tables 8, 9, and 10, 211-213; Tables 41, 42, 43, 44, and Diagrams G and H, Appendix, 718-725; and Table 52, Appendix, 739-741.
 Mecca of the Anti-Vaccinist, 200, 497.
 "Medical Annual," 697.
 Medical Association, British, at Leicester (1905), 710, 711.
 "Medical Klinik," The, 679.
 Medical Profession, The, and Art of Healing, 715, 716.
 Medical Society of London, The, 658.
 "Medical Times and Gazette, The," on "Vaccination and Consumption," 563, 564, 587.
 Medical Officers of Health for Leicester, 372-409; 411-419; 435-447; 461-476.
 Meeting in Floral Hall, Mass, 335.
 Meeting in Leicester Market-Place, Mass, 116.
 Memorial of Leicester Guardians to Royal Commission, 145-154.
 Memorials of Leicester Guardians, to Local Government Board, 95-100, 324-333.
 Merchant Guild in Leicester, 53.
 Mercia, Kingdom of, 22; Diocese of, 22; Saxon Kings of, 22, 23.
 Metchnikoff on Immunity in Infectious Diseases, 667, 668, 693, 694, 695.
 "Method, The Leicester," 461-514, 705-707.
 Metropolitan Asylums Board, 186; Tables 17, 18, 19, and 20, 250-265; Reports on Anti-Toxin and Diphtheria, Table 36 and Diagram E, 638-642; 658, 687.
 Microbe Theory. The, Professor Pettenkofer on, 605.
 Microbic Experiments: Dr. Klein, 603-605.
 Micro-Organisms and Disease: Dr. Klein, 676, 677.
 Middle Engles, 22, 23.
 Middlesbrough Small-Pox Compared with Leicester, 228, 453, 458.
 Midland Counties Railway Opened (1840), 60.

- "Midland Free Press," 59, 95, 99.
- Milford Haven, Landing of "William the Deliverer" at, 41.
- Millard, Dr. C. Killick, M.O.H. for Leicester (1901-12), 240; and Glasgow, 272; 400-409, 435; on Small-Pox Epidemic (1902-04), 435-447; on "Leicester Method," 505-514; and Microbes, 677; and Diarrhœa, 699.
- Millington, Sir Thomas, (Royal Physician), 63.
- Milnes, Alfred, M.A., F.S.S., 119, 121, 122; Table 7, showing Children's Share of Small-Pox, 205, 206; 345, 449, 514, 623.
- Minority Report, The Royal Commission, 525, 526, 534-536.
- Mint at Leicester: Roman, 19; Saxon, 26.
- Misterton, Vaccinal Deaths at: Official Inquiry, 179.
- Modus Operandi* of the "Leicester Method," 475, 476.
- Monasteries, Dissolution of, 48.
- Monk, Dr. H. G. H. (M.O.H. for Leicester, 1895-1900), 398, 399.
- Montague, Lady Mary Wortley, 73, 362.
- Montfort, Simon de, The Elder, Earl of Leicester, 31.
- Montfort, Simon de, Earl of Leicester (The Founder of English Parliaments), 30-32.
- Moore, Miss Isabella, 67.
- Moore, Mr. James, on Small-Pox in 1813, 362.
- Moore, Dr. John (M.O.H. for Leicester, 1853-67), 375.
- Morcar (Saxon Earl), 28.
- Morland, Dr. Egbert, on Tuberculin Treatment, 671.
- Mortimer's Cross, Battle of, 36.
- Morvidius (British King), 18.
- Mott, Councillor F. T., at Sanitary Congress at Leicester, 710.
- Mottoes on Banners at Great Demonstration, 109, 110, 112, 113.
- M.P.'s for Leicester first chosen in 1295, 38.
- Municipal Corporations Act of 1835, 59.
- Municipal Election, East St. Mary's Ward, 82-84.
- Muniment Room at Leicester, 54.
- Mursell, Rev. James Phillippo, Preacher and Orator, 65.
- Museum, Leicester, 20, 61, 69.
- Napoleon and the Plague at Alexandria, 360.
- Naseby, Battle of, 50.
- Nash, Brigade Surgeon, on Revaccinated Soldiers, 226.
- National Anti - Vaccination League, 108, 344, 624.
- National Vaccine Establishment: Pock-Marked Faces, 215, 216; Lymph, 536.
- Navy, The Royal, Small-Pox in, Compared with Leicester, Table 21 and Diagram C, 290, 291.
- Neale, Dr. John Headley, before R.C., 164, 165.
- Nennius (Historian), 18.
- Newbery, Mr. W. (Chairman Leicester Board of Guardians), 334, 335, 341, 342.
- New and Old Tuberculins, The, 665-670.
- Newman, Mr. George (of Gloucester), at Leicester, 346.
- Newton, Ald. Gabriel, 55.
- "New York Medical Tribune," on Propagation of Disease, 626.
- New York, Professor R. A. Gunn, of, on Evils of Vaccination, 540.
- New York University, Professor Winters, of, on Diphtheria, 635.

Nightingale, Miss Florence, on Unity of Epidemics, 628; on Nursing, 629.
 Nineteenth Century Small-Pox, Table 20, 263.
 Noble Protest for Liberty, Antigone's 366. 367.
 Norman Conquest, 28, 29, 30.
 Norman Earls of Leicester, 31.
 Norman Period (1068-1265), 29-31.
 Normans, The, 25.
 North, Ald. J., J.P. (Chairman of Guardians), 81.
 Northampton, Battle of, 36.
 Northumberland, Duke of (1553), 42.
 Norwegians, The, 24.
 Norwich, Vaccinal Deaths at: Official Inquiry, 180.
 Notification, Prompt, for Small-Pox, 472.
 Nutshell, The Case in a (A. Milnes, M.A., F.S.S.), 514.
 O'Connor, Mr. Arthur, M.P.: Letter from L.G.B. on Rugen Disaster, 592; Parliamentary Debate on "Lymph," 606, 607.
 O'Connor, Feargus, Chartist in Leicester in 1838, 62.
 Odo, Archbishop of Canterbury, 24.
 Officially Certified Deaths from Vaccination, Table 2, 179-187.
 Ogle, Dr., L.G.B. Official, 516; Famous-Table C (32) against Leicester, 520-533; Table C, 524; Errors in, 528; Tables 32, 33, and 34, 520-533.
 Oku, General: Enteric Fever and Dysentery in Japanese Army, 631.
 One-Sided Inquiry, A, 302. 303.
 Onlaf, King of Norway, 24.
 Opinions on Vaccination, Eminent. 622-629.
 Order of the Garter: When Instituted, 38.

Osler, Sir William, on Tuberculin Dispensaries, 676.
 Ostorious Scapula (Roman General), 19.
 Paganism, Julian's Attempt to Re-establish, 21.
 Palace of the Savoy, 32.
 Parental Rights, Bishop Burnet on, 367.
 Paris Morgue, The, 673.
 Parliament: Members first chosen for Leicester in 1295, 38.
 Parliament: of Bats, 39; of Fire and Faggot, 38, 41.
 Parliament and Vaccination, 77, 78.
 Parliament and the Royal Commission, 307-311.
 Parliaments in Leicester, 38, 39.
 Parliamentary Committee of 1871, 77, 85.
 Parliamentary Inquiry, Proposed, Leading to Appointment of Royal Commission (1889), 131-139.
 Parliamentary Returns on Syphilis and other Inoculable Diseases, 574-578; Table 35 and Diagram D, 577; and Tables 54, 55, 56, Appendix, 743-748.
 Parriss, Mr. W. G., of Trowbridge (Guardian), at Leicester, 347.
 Pathological Society, London, 655.
 Paul, Mr. Alex., Journalist, 344; on the Local Government Board, 344, 346.
 Payne, Mr. J. T.: Evidence before R.C., 165.
 Pearson, Dr. (Jenner's Colleague), 74.
 Pearson, Mrs. Mary Ann: Evidence before R.C., 165.
 Pease, Sir Joseph, M.P., 86, 110.

- Penalties and Costs Imposed on Anti-Vaccinators in Leicester, 101-106, 353, 354.
- Penn - Lewis, Mr., Official Accountant and Treasurer for Leicester, on Cost of Quarantines, 483; Hospitals, 488-490.
- "Pennsylvania Medical Journal" on Vaccine, Scrofula, and Syphilis, 538, 539.
- Permanent Library, Leicester, Established, 57.
- Perron, Dr., on Vaccination and Tuberculosis, 566-569.
- Persons Imprisoned at Leicester under Vaccination Act, List of, 103-105, 354.
- Pestilent and Dangerous Anti-Sanitationist, 713.
- Petitioners and Abhorrrers, 51.
- "Petit Parisien" on Tuberculosis and Vaccination, 564, 565.
- Pettenkofer, Professor, on the Microbe Theory, 605.
- Phelps, Lieut.-General A., President of National Anti-Vaccination League, 225, 344, 345, 348.
- Phillimore, Mr. Justice, 335.
- Phillips, Mr. Richard (afterwards Sir), Science Teacher, and Jenner, 56, 57.
- Pickering, Mr. John, Sanitationist (Guardian at Leeds), on Franco-German Statistic, 614, 615; Letter from Miss Florence Nightingale to, 628.
- Pickersgill, Mr., M.P.: Guardians' Clause, 312, 313, 703.
- Piton, Mr. J. Allanson (M.P. for Leicester), 118; and the Government, 131-139, 296; and Dissident Report, 300; 371, 702.
- Pigeon, Dr. Charles, on Mischievous Effects of Vaccine Lymph, 542, 543.
- Pitman, Mr., on Critical Division in the House of Lords, 78.
- Plague, The, in Leicester (1611), 49; Lord Bacon on, 360; Napoleon and, 350; in London, 652.
- Plantagenets, The, 32; Earls, 32, 34; Kings, 40, 41, 42.
- Playfair, Sir Lyon, 86, 136, 296, 615, 616.
- Pock-Marked Faces, 215-217.
- Poll Tax, The Obnoxious, 79.
- Population of Leicester, 68.
- Porter, Dr. F. Thorpe, on Revaccination, 226, 227.
- Position in Leicester, The, 91-100.
- Post - Jennerian Small - Pox Fatality, Tables 19 and 20, 261-263.
- Potter, Mr. John, Member of School Board, 81.
- Pourquier, Dr., on Dangers of Animal Virus, 590.
- "Powerful Sanitary Engines" at Leicester, 710.
- "Practitioner," The, on Diphtheria, 635.
- Pratt, Mr. Thomas: Evidence before R.C., 165.
- Pre - Jennerian Small - Pox Fatality, Table 18, 261-263.
- Preposterous Adulterations: Sir George Buchanan on Glycerinated Calf Lymph, 592.
- Priestley, Dr. Joseph, M.O.H. for Leicester (1892-1895), 411-419; on Quarantine, 414-416, and Cost of, 480, 481.
- Priestly, Sir William, M.P., on Syphilis at Leicester, 515-517.
- Pringle, Surgeon-Major, at Leicester, on Vaccination versus Isolation, 709.
- Procession at Great Demonstration, The, 111-119.
- Proceedings under the Vaccination Acts, 89-106; 351, 355.

- Professional Credit, Blow to:
Dr. Charles Creighton, 626.
- Proofs of Partiality of Royal Commission, 302, 303.
- Prosecutions at Leicester, 101-106, 325; Renewal of, 351-355.
- Protection by Marks Theory, The, 225-235; Table 12, 232.
- Protection Theory, The, for 5, 10, and 15 years, Table 11, 218, 224.
- Protze, of Elberfeld, on Dangers of Animal Virus, 590.
- Proust, Dr., on Small-Pox Fatality, Table 20, 262, 263.
- Provost of Glasgow, The Lord, 271.
- Ptolemy's Geography, 21.
- Public Buildings and Institutions in Leicester, 69, 70.
- "Public Health," Dr. Millard on "Leicester Method" in, 240.
- Pyæmia and Phlegmon, Table 35 and Diagram D, 577; Tables 55 and 56, Appendix, 745-748.
- Quain's Dictionary of Medicine, "Bovine Matter," 586.
- Quantity and Value of Serum from one Horse, 655, 656.
- Quarantine and Isolation, Cost of, Tables 25, 26, 27, 28, 466-476; 477-486.
- Quarantine at Home, 415, 476; at Hospital, 415, 476.
- Quarantines, Vaccination of, Table 28, 486.
- Quinton Polyclinic, The, 699.
- Radcliffe, Dr., Diagnosis of Small-Pox in Queen Mary II., 63.
- Radcliffe, Mr. J. H., and Official Inquiry respecting Vaccinal Deaths at Mistor-ton, 179.
- Railway Excursion, First in the World, from Leicester, 60.
- Rassowitz, Professor, Diphtheria in Vienna, 635.
- Ratæ (Roman City of Leicester), 19, 20, 21.
- Raw, Dr. Nathan, M.D., M.R.C.P., on Treatment of Tuberculosis, 661.
- "Recrudescence of Leprosy" (Mr. W. Tebb), 549-555.
- Reeve, Mr. Wm. Napier: "Chronicles of Castle and Earls of Leicester," 33.
- Reference, Terms of, to R.C. on Vaccination, 140-142.
- Reformed Corporations Act (1835), 47, 59.
- Reform Act (1832), 59.
- Reformation, The, 32, 46.
- Reginald, Earl of Cornwall, at Leicester, 30.
- Registrar-General, 183-187; and Leicester, 188; Letters from, 529, 530; Death-Rates, 292, 293; Deaths from Vaccination, Table 2, 184, 185; Reports on Consumption, 569; Evidence against Anti-Toxin, 643-645.
- Renewal of Vaccination Prosecutions in Leicester, 351-355.
- Report, Final, of Royal Commission, 304-306; on Risks of Vaccination, 588.
- Report on Small-Pox at Sheffield, 276-289.
- Results of Serum Treatment, "Anaphylaxis," 686-696.
- "Retired Medico." on Vaccination as the Cause of Consumption, 565.
- Revaccinated Army and Navy Compared with Leicester, 226, 227, Table 21 and Diagram C, 290, 291.
- Revaccination, 75, 226, 227.
- Revolution, A Notable, 71, 72.
- Richard, King. I. (Cœur de Lion), 40, 54; II., 40; III., at Leicester, 41; at Bosworth, 41, 42.

- Richard de Lucy and the Siege of Leicester, 30.
- Ricketts, Dr., and Hospital Ships, 254.
- Ridley, Bishop (Suffered Martyrdom with Latimer), 46.
- Rights of Local Self-Government Conference at Leicester on, 344.
- "Rights of Man," Paine's, 56, 57.
- Rights, Parental, Bishop Burnet on, 367.
- Risks of Tainted Lymph: Royal Commission, 520; Mrs. Handley, 554, 555.
- Ritchie, Mr., M.P., President of the L.G.B., 134-136, 296, 327; Source of Lymph, 606, 607.
- Rivers—Leir, 17; Soar, 18, 32, 188; Swift, 32; Trent, 33; Humber, 33.
- Riviere, Dr. Clive, on Tuberculin Treatment, 671.
- Robert de Beaumont, Earl of Leicester, 30, 31, 53.
- Robertson, Mr. W., M.R.C.V.S., on the Production of Anti-Toxin, 655.
- Robinson, Mr. Enoch, M.R.C.S., at Leicester, 119, 122.
- Roe, Sir Thomas (M.P. for Derby), 87.
- Rogers, Professor J. E. Thorold (M.P. for Southwark), 87.
- Rolleston, Sir John (M.P. for Leicester), 235, 312, 351, 353.
- Roman Period (52-448), 19-21; Pavements, 19; Mint, 19; Villa, 19; Gladiator, 19; Amphitheatre, 19; Basilica, 19; Prætorium, 19; Mil-liare, 20; Emperors, 21; Municipium, 22.
- Rome, The Eternal City, 17; Imperial, 20.
- Roth, Dr., Reputed Author of "Franco-German" Statistical Fraud, 614-616.
- Rothley Temple (Lord Macaulay's Birthplace), 62.
- Rowley, Dr. Wm., M.R.C.P., on Deaths and Disease from Vaccination, 572.
- Royal Commission Debate, 131-139; on the Bill of 1898, 308-311.
- Royal Commission on Tuberculosis, 562, 681-685.
- Royal Commission on Vaccination: Appointment, 140-142; Terms of Reference, 140-142; Leicester Witnesses, 155-170; on "Protection," 219; What they "Think" (par. 502, Final Report), 219; on Marks Theory (Table 12), 230-235; Sheffield, 230; Dewsbury, 231; Leicester, 231; London, 233; Warrington, 233; Dr. Gayton's Figures, 233; Mr. Sweeting's Figures, 233; Mr. Marson's Figures, 233; Inquiry Ended, 295, 296; How they Blinked the Facts, 297-301; Final Report, 304-306; Conclusions, 304, 305; Recommendations, 305; Admission of Risk from Vaccination, 520; on Syphilis, 520-524; Reflections on Leicester, 521-524; Minority Report, 536, 588; Disease and Deaths from Vaccination, 572; Disease and Deaths from Glycerinated Calf Lymph, 573, 592; Final Report, 588; 131, 219, 222, 229.
- Royal Institute of Public Health: Meeting at Exeter, 499.
- Royal Jennerian Society: Pock-Marked Faces, 216.
- Ruata, Professor Carlo, on Small-Pox in Italy, 620, 621.
- Rufus, William (The Red King), 29, 40.
- Rugen Vaccine Disaster, Sir G. Buchanan on; German Com-

- missioners on; Local Government Board on, 592.
- Rupert, Prince, at Leicester, 50.
- Russell, Dr. J. B., M.O.H.: Vaccinal Condition of Glasgow, 275.
- Russo-Japanese War: Enteric Fever and Dysentery, 631.
- St. Albans, Battle of, 36; Small-Pox Compared with Leicester, 248, 458.
- St. Margaret's Church, Leicester, 22.
- St. Mary's Church, Leicester, 32.
- St. Nicholas Church (Facing), 32.
- Saddington, Mr. George, 81, 149; Evidence before R.C., 165, 166.
- Salford Small-Pox Compared with Leicester, 248, 458.
- Salisbury, Lord, on Vaccination Bill of 1898, 329.
- Samian Pottery, 19, 20.
- Sanitary Institute: Conference at Leicester (1885), 709; at Manchester (1902), 712.
- Sanitary Staff, Gratuities to, 481, 483.
- "Sanitas Sanitatum Omnia Sanitas," 294.
- Sanitation versus Vaccination, 357-409.
- Sanitation, Mr. H. D. Dudgeon on, 357-367.
- Saving of Infants' and Children's Lives at Leicester, Tables 13, 14, 236-244; Table 49 and Diagram J, Appendix, 733, 734.
- Saxon Earldoms, 27; Kings, 40.
- Saxon Mint in 987, 26.
- Saxon Period (550-780), 22, 23.
- Saxons, 22-28.
- Saxons Restored, 26, 28.
- Scapula, Ostorius (Roman General), 19.
- Scarlet Fever: Incidence Tables 8, 9, and 10, 212, 213, Tables 41, 42, 43, 44, and Diagrams G and H, Appendix, 718-725; and Table 52, Appendix, 739-741.
- School Board, First Elected in Leicester (1870), 67.
- "Scotsman," The, on House of Lords Division, 78.
- Scrofula, Tabes Mesenterica and, 521; Tables 32, 33, and 34, 524-528; 531, 532; Table 35 and Diagram D, 577; and Tables 54, 55, and 56, Appendix, 743-748.
- Seaton, Dr., "Handbook on Vaccination," 586; and Dr. Ceely, 587.
- Sea Water Treatment of Diarrhoea, 697-700.
- Seed Lymph, Official Reports Ominously Silent on, 603.
- Select Committee on Vaccination (1871), 85, 136, 702.
- Sequelæ from Anti-Toxin, 657-659.
- Serapathy, Anti-Toxin, and Diphtheria, 630-654.
- Serums, Injurious and Fatal Injections of, 658, 659; Varieties of Tuberculin, 665, 666.
- Serum and Serum Treatment: Results, 686-696; Dr. Nathan Raw, 661-663; Dr. Clive Riviere and Dr. Egbert Morland, 671; Professor Annett, 662; Dr. Calmette, 663; Dr. Landmann, 666; Dr. Carl Spengler and Dr. Godfrey, 668, 669; Dr. Hopkins Walters, 670; Mr. Stewart Stockman, M.R.C.V.S., 684; Dr. Sezary, 678; Dr. E. W. Goodall, 689.
- Serum-Therapy, 686-696.
- Shakespeare at Leicester, 47.
- Shambles Lane, 51.
- Shaw, Mr. Solomon, Chairman of Leicester Board of Guardians, 331, 337, 342.
- Sheffield Small-Pox, 230, 296;

- Compared with Leicester, 248, 276-289, 458.
- Sheffield Small-Pox Epidemic (1887-88): Dr. Barry's Report on, 230; Sir G. Buchanan on, 276-289; Cost of, 287, 288; Losses through the, 288, 289, 296; Compared with Leicester, 276-289, 248, 458.
- Shoe Last Industry Introduced by Mr. H. Davey, 61.
- Siddons, Mr. and Mrs., at Leicester, 56.
- Simon, Sir John, Medical Officer of L.G.B., 75; Syphilitic Contagion, 541.
- Simon de Montfort the Elder, Earl of Leicester, 31.
- Simon de Montfort, Earl of Leicester, 30, 31, 32; Founder of English Parliaments, 38.
- Simpson, Sir James, and Isolation, 461.
- Skin Diseases, Table 35 and Diagram D, 577; and Tables 54, 55, and 56, Appendix, 743-748.
- Skipworth, Mr. G. B., of Caistor (Guardian), at Leicester, 119, 124.
- Small-Pox in British Army Compared with Leicester, 291; in British Navy, 291.
- Small-Pox Case Fatalities: Dr. A. de Häen, Dr. Heberden, Leicester, Metropolitan Asylums Board (London), Dr. Proust, Dr. Tissott, Mr. Wheeler—261-263; American, 261-263; Continental, 261-263; England, Scotland, and Ireland, 261-263; 191-196, 203-207, 212, 213; London, 250-253, 260; Leicester, 195, and Other Towns, 248, 458; "Marks" Fatality, 233; Pre and Post Jennerian, 261; Compared from 1746-1904, 262, 263; Army, Navy, and Japan Compared with Leicester, 290, 291; Glasgow, London, and Sheffield Compared with Leicester, 492; Death-Rate per Million at Leicester, 190, 191, 193; and Fevers, Children's Share of, 203-207; Incidence of, 212, 213; Cases and Quarantines, 478, 479, 483, 484.
- Small-Pox Epidemics, Cost of: London, 264, 265, 492; Glasgow, 274, 275, 492; Sheffield, 287-289, 492; Leicester, 492.
- Small-Pox and Fevers, Children's Share of: Leicester (Table 6), England (Table 7), 203-207.
- Small-Pox, Prompt Notification of, 472; Hospitals, Leicester, 487-494; Lives Saved by "Leicester Method" 241-246; Money Saved, 490.
- Small-Pox Importations, Table 5, 195-197.
- Small-Pox and King James in 1616, 49.
- Small-Pox in Leicester, 49, 188, Table 3, 190, 191; Epidemics, Table 4, 192-194; 411-460.
- Small-Pox: at Middlesbrough, Compared with Leicester, 248, 453, 458; at Warrington, 233, 248, 458; at Sheffield, 276-289, 492; at Halifax, 248, 458; Manchester, 248, 458; London, 250-260, 453, 492; Aston Manor, 248, 458; Liverpool, 248, 458; Brighthouse, 248, 458; Glasgow, 248, 266-275, 458, 492; Birmingham, 248, 458; Salford, 248, 458; St. Albans, 248, 458.
- Small-Pox Tables—3, 190, 191; 4, 193; 5, 195; 6 and 7, 204-206; 8, 9, and 10, 212, 213; 16, 248; 17, 18, 19, 20, 260-263; 21, 291; 25, 478, 479; 27, 483, 484; 29, 492; 41, 42, 43, 44, Appendix, 718-725; 51, 52, Ap-

- pendix, 738-741; 54, 55, and 56, Appendix, 743-748.
- Small-Pox Unvaccinated Case Fatalities, 264, 442, 443, 452-454, 706.
- Small-Pox Vaccine Virus, 606-610.
- Small-Pox, Varieties of, 418; Isolation, 472, 475, 476; Quarantine, 477-486; Regulations at Leicester, 475, 476; Errors of Diagnosis, 198-202; Case Fatality, 248, 261-263, 458; Death-Rate per Million at Leicester, 191, 193 (Children), 432.
- Smith, Rev. Albert: Evidence before R.C., 166.
- Smith, Dr. Southwood, 713.
- Smith, Dr. Stephen, on Anti-Toxin and Diphtheria, 636, 637.
- Smith, Mr. William: Evidence before R.C., 166.
- Soar, River, at Leicester, 18, 32, 188.
- Soerensen, Professor, on Diphtheria Fatality, 635.
- South Fields or "Cowhay": Gift to Leicester by Earl Simon de Montfort, 30.
- Special Report on Small-Pox, Metropolitan Asylums Board Statistical Committee (1902), 250.
- Spengler, Dr. Carl: Treatment for Tuberculosis, 668, 669.
- Spurgeon, Rev. C. H., the Famous Preacher, at Leicester, 56.
- Stafford, Ald. John, J.P.: Evidence before R.C., 166, 167.
- Stafford, Mr. Josiah: Evidence before R.C., 167.
- Standard Twentieth Century Dictionary: Definition of Lymph, 579.
- Stanion, Mr. O. B. (Guardian), 81, 334, 337, 341, 342.
- Stanyon, Mr. William, 120.
- Statistical Committee of Metropolitan Asylums Board: Special Report on Small-Pox, 250.
- Statistical Comparisons with Leicester, 247-294; Small-Pox with Group of Towns, Table 16, 247-249; London, etc., Tables 17, 18, 19, 20, 250-265, 492; Glasgow, 266-275, 492; Sheffield, 276-289, 492; Japan, British Army and Navy, Table 21 and Diagram C, 290, 291; General Death-Rate, England and Wales and Great and Small Towns, Tables 22 and 23, 292-294; London, Glasgow, and Sheffield Small-Pox Case Fatality and Cost, 492.
- Statistical Department of Paris and Diphtheria, 637.
- Statistical Evidence, 171-246.
- Statistical Evidence of Failure of Anti-Toxin, 630-654.
- Stein, Dr., and Vaccination: No Scientific Ground for, 363.
- Stephen, Mr. J. T., Journalist, 81; at Meeting of Sanitary Institute, 710.
- Stephen, King, 40.
- Stewart, Dr. W. J. J.: Report on Vaccination at Gore Farm Lower Hospital, 186, 187, 456, 457.
- Still, Dr. G. F., M.D., F.R.C.P., on Sea Water and Diarrhœa, 697.
- Stirling, Professor William, M.D., LL.D., at B.M.A. at Leicester, 711.
- Stockman, Mr., M.R.C.V.S., on Tuberculin Reaction, 684.
- Storey, Mr. John, J.P. (Town Clerk of Leicester), before R.C., 167.
- Story of a Great Delusion, The (William White), 57.
- Stretton, Ald. C., J.P.: Evidence before R.C., 167.
- Stuart and Commonwealth Period (1603-1714), 49-52.

- Stuarts, The, 43.
- "Student's Journal and Hospital Gazette," The, on Syphilitic Lymph, 543.
- Summary and Conclusions, 701-716.
- Summary of Prosecutions, 101-103, 353.
- "Sunday Herald," The, on the Great White Plague, 565, 663.
- Superstition in Medicine: Dr. Hugo Magnus, 659.
- Supplementary Evidence against Vaccination, 515-578.
- Sutherland, Dr. Halliday, on Tuberculin Dispensaries, 676.
- Sweating Sickness in England, The, 41.
- Sweeting, Dr.: Small-Pox at Fulham Hospital, 233.
- Swift, River, 32.
- Syphilis and Erysipelas at Leicester, 515-533; Table 30, 516; and England and Wales, Table 31, 518; Tables 32, 33, and 34, 524-528; England and Wales, Table 35, and Diagram D, 577; and Tables 54, 55, 56, Appendix, 743-748.
- Syphilisation of Soldiers in Algeria, 542.
- Syphilis, Invaccination of, 537, 548.
- Syphilis in Leicester Compared with England and Wales, Table 31, 518.
- Syphilis, Vaccination and, at Leicester, 515-536.
- Syphilis, Vaccination and, 515-524, 527, 528, 531, 532, 534-548, 577.
- Syphilitic Virus, 537-539.
- Tabes Mesenterica and Scrofula, 520-533; Tables 32, 33, 34, 524-528; Table 35 and Diagram D, 577; and Tables 54, 55, and 56, Appendix, 743-748.
- Tables, List of:—Cowpox, etc., Deaths from, Table 2, 184, 185; Diarrhoea, Deaths from, Tables 13 and 14, 236-238; Diphtheria, Deaths from, Tables 36-40 and Diagrams E and F, 638-654; Erysipelas, Deaths from, Table 1 and Diagram A, 176, 177; Exemption Certificates, Table 24, 322; General Death-Rates, Table 15, Diagram B, 246; General Death-Rates, Tables 22 and 23, 292, 293; General Death-Rates at Various Ages, Tables 45-49 and Diagram J, Appendix, 725-734; General Death-Rates, Zymotic Percentages at Ages, Table 51, Appendix, 738, 739; Small-Pox, etc., Deaths from, Tables 3-5, 190-195; Small-Pox and Fevers, Tables 6 and 7, 203-207; Relative Percentage of Deaths from Small-Pox and other Zymotic Diseases, Tables 8, 9, and 10, 212, 213; Small-Pox Cicatrices, Table 12, 232; Small-Pox Case Fatalities, Tables 16-21 and Diagram C, 248-291; Small-Pox Quarantines and Cost of "Leicester Method," Tables 25-28, 478-486; Small-Pox Epidemics and Fatalities, Table 29, 492; Small-Pox, Percentage of Deaths, Tables 51 and 52, Appendix, 738-741; Syphilis and Erysipelas, Tables 30 and 31, 516, 518; Syphilis and Eight Other Inoculable Diseases, Leicester Compared with E. and W., Tables 32-35 and Diagram D, 524-577; Syphilis and Eight Other Inoculable Diseases Compared with England and Wales from Parliamentary Returns, Tables 54, 55, 56, Appendix, 743-748; and Diagram D,

- 577; Vaccinations at Leicester, Table 11, 221, and Table 50, Appendix, 735-738; Zymotic Diseases, Including Small-Pox, Tables 8, 9, and 10, 212, 213, Tables 41-44 and Diagrams G and H, Appendix, 718-725.
- Tainted "Lymph," Risks of, 520, 554, 555.
- Taylor, Dr. H. H., F.R.C.S.: List of nearly 1,000 Cases of Vaccino-Syphilis, 543.
- Taylor, Mr. P. A. (M.P. for Leicester), 85-88, 118, 126, 615, 702.
- Tebb, Mr. William, President National Anti-Vaccination League, 116, 119, 120; on Leprosy, 549-560; Injuries and Deaths from Vaccination, 572.
- Tebb, Mrs. Wm., at Leicester, 116.
- Tebb, Dr. W. Scott, Author of "A Century of Vaccination," 225, 543, 544, 592, 593.
- Temple of Hygeia, 714.
- Terms of Reference to R.C., 140, 142.
- Theodore, - Archbishop of Canterbury, 22.
- Theory, The Protection, for 5, 10, and 15 years, Table 11, 218-224.
- Theory of Vaccination: Professor Tyndall, 611.
- Thilenius, Dr., and the "Franco-German" Army Statistic, 617.
- Thin, Dr., on Leprosy, 551, 552.
- Thomas, Earl of Leicester and Lancaster, 34.
- Thorne, Sir Richard Thorne, 309; on Glycerinated Calf Lymph, 593-597.
- Thorne's, Sir Richard Thorne. Experience of "Anaphylaxis," 690, 691.
- Thornton, Mr. T. W.: Evidence before Royal Commission, 167.
- Threatenings of Disaster to Leicester, 711.
- "Times," The, on the Leicester Demonstration, 128-130; on R.C. Debate, 132, 136; on Bill of 1898, 308; 637, 669, 713.
- Tissott, Dr., on Small-Pox Fatality, 262.
- Titanic Disaster, The, 700.
- Tollputt, Mrs. Hannah: Evidence before R.C., 167, 168.
- Tomkins, Dr. H., M.D., M.O.H. for Leicester (1885-92), 389-397.
- Totta (or Torthelm), First Bishop of Leicester (737), 22.
- Toussaint, M., on Dangers of Animal Vaccination, 587.
- Towton, Battle of, 36.
- Trajan (Roman Emperor), 20.
- Tramps, Distribution of Small-Pox by, 455.
- Transmissibility of Tuberculosis, 561.
- Transmission of Leprosy, Dr. A. Abercromby on, 553.
- Treatment of Tuberculosis (see Serum and Serum Treatment), 658-696.
- Trent, River, 33.
- Trousseau, Professor A., M.D., on Vaccinal Syphilis, 539.
- Tuberculin: Deaths from, 661; and "British Medical Journal," 678-680; Reaction, 684.
- Tuberculin, Professor Koch's, 556, 561, 562, 653, 660, 661, 662, 665, 666, 668, 671, 672, 679.
- Tuberculin and Leprosy, 556-560.
- Tuberculins, New and Old, 665-670.
- Tuberculin Treatment, by Doctors Olive Riviere and Egbert Morland, 671-674.
- Tuberculin and Tuberculosis, 660-670.

- Tuberculosis: British Congress on, 561; Concurrent Increase of Vaccination and, in European Armies, 568.
- Tuberculosis Dispensaries, 675-677.
- Tuberculosis, Human, and Transmission to Cattle: Dr. Koch, 561.
- Tuberculosis, Royal Commission on, 562, 681-685.
- Tuberculosis, Transmissibility of, 561.
- Tuberculosis, Treatment of (see Serum and Serum Treatment).
- Tuberculosis: Vaccination and, 561-569; in Japan, 569.
- Tuberculous - Peritonitis and Scrofula, Table 35 and Diagram D, 577; and Table 56, Appendix, 746-748.
- Tudor Period (1485-1603), 45-47, and Kings, 43.
- Turenne, Auzias, 545.
- Twentieth Century Small-Pox Fatality, Table 20, 252, 263.
- Tyndall, Professor, Theory of Vaccination, 611.
- Typhoid, Fatal Inoculations for, 631, 632.
- Typhoid Quarrel, A, 694.
- Typhus and Typhoid Fever, Children's Share of, Leicester, Table 6, 203-205; England, Table 7, 205-207.
- Unity of Epidemics, Miss Nightingale on, 628.
- Universal Distribution of Diseases by Arm-to-Arm Vaccination, 583.
- Unvaccinated Children at Leicester, 193, 194, 199, 329.
- Unvaccinated Small-Pox Case Fatalities, 264, 442, 443, 452, 454, 706.
- Unwona, Bishop of Leicester (810), 23.
- Vaccinal Deaths Officially Certified, at Misterton, 179; Norwich, 180; Derby, 180, 181; Leicester, 181, 182; by the Registrar-General, Table 2, 183-187.
- Vaccinal Injuries and Deaths in Leicester, 173-175.
- Vaccinal Injuries, Mr. Tebb's List of, 572; 570-573, 702-703.
- Vaccination, 611-621; in Germany, 618-620; in Italy, 620, 621; Select Committee on (1871), 85, 136, 702; and Small-Pox, 73, 76; Dr. Seaton's Handbook on, 586.
- Vaccination Acts: Burned in Leicester Market-Place, 105; Renewal of Prosecutions at Leicester under the, 351-355; Completely Ignored and Virtually Repealed in Leicester, 354, 355; Proceedings under, 89-106.
- Vaccination, Dr. Ballard on: "Not to be Trifled with," 223; Essay on, 538.
- Vaccination, Erysipelas and, 176-182; Evils of, 540.
- Vaccination, Fines in Leicester, 101-106, 351, 355.
- "Vaccination Inquirer," 91, 108, 344, 345, 545, 566, 589, 603, 607, 621, 624.
- Vaccination Inquiry. Dr. Makuna's, 544, 570.
- Vaccination League Circular, Anti-Compulsory, 583.
- Vaccination Martyrs in Leicester, 103-106.
- Vaccination and Syphilis at Leicester, 515-519; in England and Wales, and at Leicester, 520-536.
- Vaccination, Professor Tyndall on the Theory of, 611.
- Vaccination and Tuberculosis, 561-569; in Japan, 569.
- Vaccination and Leprosy, 549-560.
- Vaccinal Deaths Officially Cer-

- Vaccination, Bastard, Doubtful, and Spurious, 223.
- Vaccination: Bill (1898), 307-311; Act of 1898, 315-319.
- Vaccination Bribes, 186.
- Vaccination Census at Darlington, 572.
- Vaccination, Deaths, Diseases, and Injuries from: Leicester, 173-175; Officially Certified, Table 2, 179-187 (of these 251 since introduction of Glycerinated Calf Lymph); Other Sources, 570-573; England and Wales, 574-578; Glycerinated Calf Lymph, 573, 592, 593, 609.
- Vaccination, Diseases Injected and Death Spread by, 570-573, 702, 703.
- Vaccination, Eminent Opinions on, 622-629.
- Vaccination Exemptions at Leicester, 322.
- Vaccination Inquiry by Dr. Makuna, 544, 570.
- Vaccination in Leicester, Cost of, 480, 490.
- Vaccination League, The Imperial, 75-76.
- Vaccination of Contacts, 481; and Quarantines in Leicester, 486.
- Vaccination Officer, Guardians Refuse to Appoint, 323-333.
- Vaccination Scars, 225-229, 230-235; Dr. Monckton Copeman's Opinion, 235.
- Vaccination, Supplementary Evidence against, 515-578.
- Vaccination, Universal Distribution of Diseases by Arm-to-Arm, 583.
- Vaccino-Syphilis, 319, 515-536, 537-548, 574-578.
- Vallee, Professor, on "Bovv Vaccine" and Tuberculosis, 564, 565.
- Varieties: of Vaccination, 223, 224; of Small-Pox, 418; of "Lymph," 580, 582; of Serums, Tuberculin, 665, 666.
- Variolæ Vaccinæ, 75.
- Vaughan Family, The, 65, 66.
- Vaughan Working Men's College, The, 66.
- Vellum Book, The, 54.
- Vericinida Lydia (a Roman Lady), 19.
- "Via Devana," The, 20.
- "Via Fossata," The, or Fosse Way, 20.
- Victoria Park, Leicester, 30.
- Victoria, Queen, 43, 59.
- Victorian Period (1837-1912), 59-70.
- Vienna and Lower Austria, Diphtheria in, 635.
- "Vienna Medical Journal": "Franco-German" Army Statistic, 614.
- Vincent, Professor, on Sterilised Bacilli, 695.
- Virus, Dangers of Animal, 586, 590.
- Virus, Syphilitic, Dr. Ballard on, 537, 538.
- "Vis Medicatrix Naturæ," 673, 674.
- Wakerley, Ald. A., J.P., 337, 347.
- Wales, Prince of, at Abbey Park, Leicester, 44, 48.
- Wallace, Professor Alfred Russel, O.M., 68, 297-300, 624, 629.
- Walters, Dr. J. Hopkins, on Tuberculin in "Skilled Hands," 670.
- Ward, Mr. Joseph: Evidence before R.C., 168.
- Wardle, Mrs.: Evidence before R.C., 168.
- Warrington Small-Pox, 233, 299; Compared with Leicester, 248, 417, 458.
- Wars of the Roses, 36, 37, 42.
- "Wash and be Clean," 716.

- Washbourne, Dr., on Paralysis caused by Anti-Toxin, 658.
- Waterloo Hall, Anti-Vaccination Conference in, 123-126.
- Webster, Mr. Thomas, and the Hat and Cap Industry, 61.
- Wesley, John, Famous Divine, at Leicester, 55, 56.
- "Westminster Review," 358, 359.
- Weston, Mr. H. (Sheffield), at Leicester, 119.
- What is Anti-Toxin? 655-659.
- Wheeler, Mr. Alexander, 261-263; on Sheffield, 286; on "Franco-German" Statistic, 616.
- Whitbread, Samuel (M.P. for Bedford), Royal Commissioner, 369.
- White, Dr. Sinclair, M.O.H. for Sheffield, 276, 277.
- White, Mr. William, Editor of "Vaccination Inquirer," and Author of "The Story of a Great Delusion," 57; on "Ceara" Fable, 613.
- White, Sir Thomas, Merchant and Philanthropist, 46.
- Wholesale Prosecutions: Their Effect, 89, 90.
- Whooping Cough, Tables 8, 9, and 10, 212, 213; Tables 41, 42, 43, 44, Appendix, 718-725; and Table 52, Appendix, 739-741.
- William of Bavaria, Earl of Leicester, 34.
- William the Conqueror, 27, 28, 29, 40; II., 43; the "Deliverer," 52, 63.
- Williams, Dr. Whitbridge, 'on Benign Bacilli, 658.
- Wilson, Mr. C. J. (Boston), at Leicester, 119.
- Windley, Ald. T., J.P., Chairman of Leicester Sanitary Committee Thirty-Six Years, 143; before R.C., 168, 169; and Public Health, 368-371, 463; at Exeter, 499.
- Winter Street Hospital at Sheffield, 281.
- Winters, Dr. Joseph, New York, on Diphtheria, 635; on Blood Corpuscles, 693.
- Witches Executed at Leicester, Nine, 49, 50.
- Wolsey, Cardinal, at Leicester Abbey, 48.
- Wood, Mrs. Fanny: Evidence before R.C., 169.
- Wright, Ald. Sir Thomas, J.P., Mayor of Leicester: Evidence before R.C., 169, 170.
- Wright, Mr. Joseph, 81.
- Writ of Attachment Served on Leicester Guardians, 341, 342.
- Wycliffe, "Morning Star of the Reformation," 32.
- Wyggeston, William, Merchant and Philanthropist, 45.
- Wulfred, Archbishop of Canterbury, in Leicester (810), 23.
- Wulfstan, Archbishop of York, 24.
- Yersin's Sera, 631.
- York, City of, 21.
- Young, Mr. H. G. Schultess, M.A., 334, 350, 352, 353.
- Young, Mr. William, Secretary of the London Society for the Abolition of Compulsory Vaccination, 117, 119, 623.
- "Zoophilist," The, and Deaths from Koch's Tuberculin, 661.
- Zymotic Diseases, 208-210; Tables 41, 42, 43, and 44, and Diagrams G and H, Appendix, 718-724.
- Zymotic Diseases, 208-214; Incidence of, or Relative Percentage of the Death-Rates of each of the Seven Principal, to the Whole, Leicester, Tables 8, 9, and 10, 211-214.
- Zymotic Death-Rates per Million, Tables 41, 42, 43, 44, and Diagrams G and H, Appendix, 718-725.

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